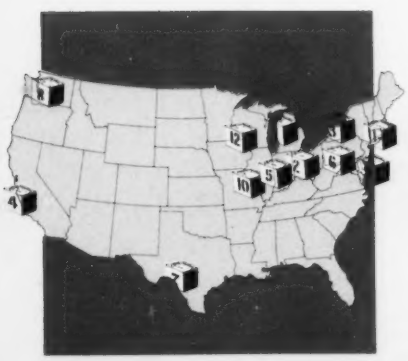
AUGUST 5, 1974

Commerce Today

Jobs, Enterprises For Indians In Federal- State Program

Hoover: Centennial Legacy



Michigan, Ohio, New York Are Top Exporting States

FROM THE SECRETARY

A Centennial Message

The 100th anniversary of the birth of one of my predecessors, Herbert Clark Hoover, is being celebrated this month.

This great American, who became the 31st President of the United States, was Secretary of Commerce 1921-'28. And in this post, he made the Commerce Department a highly effective instrument of government.

Mr. Hoover not only was a superb organizer and manager, he also possessed a deep wisdom and insight into the elements that make America great. One of these, he often pointed out, was the opportunity afforded its citizens to rise to positions of leadership.

Nowhere did he express this idea more succinctly or with greater clarity than in an essay he wrote in 1949. It was entitled "The Uncommon Man." I believe that it carries a message with a special meaning for us today:

The Uncommon Man

In my opinion, there has been too much talk about the Common Man. It has been dinned into us that this is the Century of the Common Man. The idea seems to be that the Common Man has come into his own at last.

Thus we are in danger of developing a cult of the Common Man, which means a cult of mediocrity. But there is at least one hopeful sign: I have never been able to find out who this Common Man is. In fact, most Americans, and especially women, will get mad and fight if you try calling them common.

This is hopeful because it shows that most people are holding fast to an essential fact in American life. We believe in equal opportunity for all, but we know that this includes the opportunity to rise to leadership—in other words, to be uncommon.

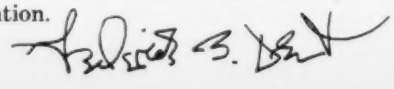
Let us remember that the great human advances have not been brought about by mediocre men and women. They were brought about by distinctly uncommon people with vital sparks of leadership. Many of the great leaders were, it is true, of humble origin, but that alone was not their greatness.

It is a curious fact that when you get sick you want an uncommon doctor; if your car breaks down you want an uncommonly good mechanic; when we get into war we want dreadfully an uncommon admiral and an uncommon general.

I have never met a father and mother who did not want their children to grow up to be uncommon men and women. May it always be so. For the future of America rests not in mediocrity, but in the constant renewal of leadership in every phase of our national life.

Today, our free economic system provides an unsurpassed seedbed of opportunity for individual aspirations and inventiveness to grow and flower for the benefit of all. Our job is to ensure that this system remains free and unfettered. We must never permit mediocrity to become the standard by which we measure performance.

The uncommon leadership and ability which characterized all of Mr. Hoover's endeavors stand as a monument to the memory of this great American. It is with great pride that we here at the Department of Commerce, which he headed with such distinction, join in paying tribute to him. We are confident that a hundred years from now, on the bicentennial of his birth, his achievements and his philosophy of leadership will still be remembered by a grateful nation.



Commerce Today

Vol. IV, No. 22, Aug. 5, 1974

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COVER: *Two featured articles that focus on State activities and another that is related to the celebration of the centennial of the birth of Herbert Clark Hoover are called to the attention of* Commerce Today *readers. The Hoover centennial is also the subject of the "From the Secretary" column on the opposite page.*

GNP Again Declines, But Only By 1 Percent; Inflation Rate Slows From 12.3 to 8.8 Percent

Economic Highlights is prepared by the Office of the Assistant Secretary for Economic Affairs.

The nation's production of goods and services slowed further in the second quarter of 1974 but the decline was only 1.2 percent on an annual rate basis compared with 7.0 percent in the first quarter.

There was also a marked abatement in the pace of inflation, from an annual rate of 12.3 percent in the first quarter to 8.8 percent in the second.

The report on Gross National Product, along with the annual mid-year revisions, continued to show an economy that is going through a great many puzzling, sometimes offsetting, changes with few clues to the immediate future. One general explanation is that both economic behavior and the statistics themselves have been heavily affected in recent months by rapid price rises, the oil embargo and the associated jump in energy costs, high interest rates, and the removal of wage-price controls.

In general terms, the economy downshifted from an extremely rapid rate of growth in early 1973, and for the final three quarters of that year plugged along at an annual rate of approximately 2 percent. Then came the plunge in the first quarter, a decline of 7 percent, followed by the much milder decline of 1.2 percent in the second quarter.

Shift among components

The GNP statistics for the second quarter, as well as the mid-year revisions, showed that:

- business investment in plant and equipment was not as strong as had been expected because of accelerating price increases.
- auto production increased in the second quarter after a sharp decline in the first quarter (and milder declines in three previous quarters) and consumer durables as a whole rose at an annual rate of 9 percent.
- business investment in inventories over the past several quarters was much larger than originally reported.
- net exports of goods and services (exports minus imports) dropped sharply in the second quarter, mainly because of unusual developments that are not likely to recur.
- personal income was much higher in 1973 than originally reported, mainly because of an underestimate of farm income and dividends.
- while the Arab oil embargo began in October, the economy grew at a slightly faster rate in the fourth quarter of 1973 than in the third.

Housing, automotive role

Total GNP in the second quarter was only slightly below the general expectation of a "flat" quarter. However, it was widely assumed that the weakness in the economy was due primarily to declining trends in homebuilding and automobiles and that other sectors would remain fairly strong.

While homebuilding was weak in the second quarter, as expected, the decline of 9 percent in real terms was quite different from the 39 percent plunge of the first quarter. The pattern of housing starts in recent months, tight money, and a slight upward movement in vacancy rates offer little hope for strong improvement in this area.

Spending by governments in the second quarter provides another example of the effects of inflation. While federal purchases of goods and services were virtually unchanged, state and local government spending declined slightly. This decrease apparently was due to reduced buying power of fixed budgets and a leveling-off of Federal revenue-sharing payments.

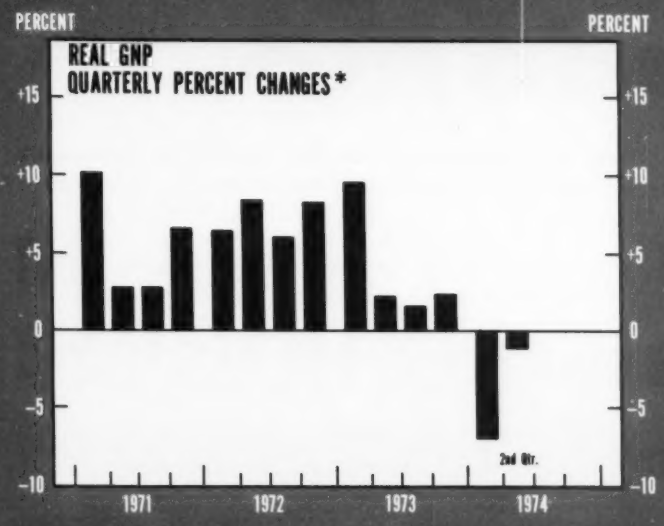
It is now believed that the strong gains in business plant and equipment spending in the second quarter melted away to near-zero when adjusted for inflation. Thus, the businessman is apparently in the same position as the consumer: he has been spending more money, but, because of the rapid rate of inflation, he is buying only about the same amount of productive facilities as he previously purchased.

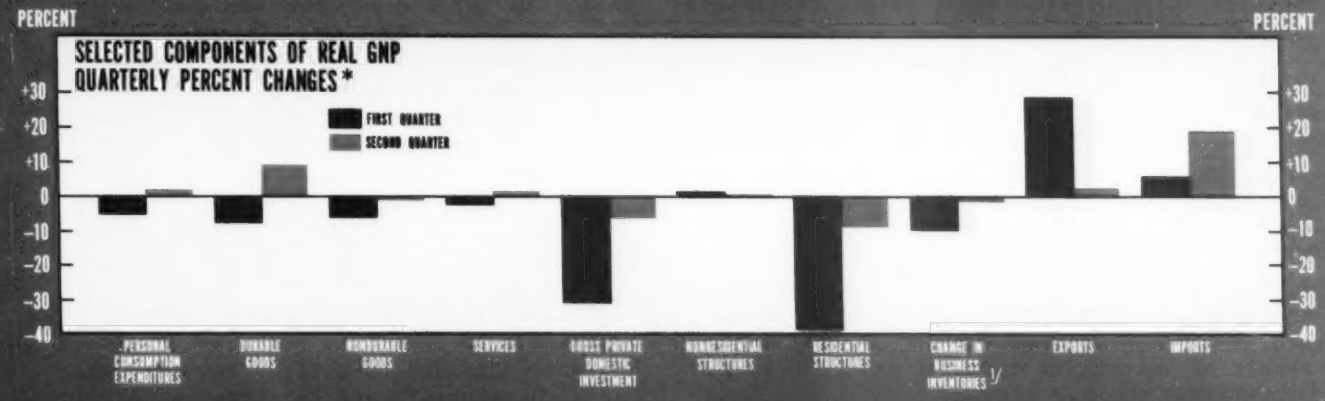
Inventories in real terms were about $7.5 billion higher in the fourth quarter of 1973 than originally reported, and the same was true of the first quarter of this year. This would seem to belie the theory that serious supply problems plague the economy, but some of the inventory accumulation may have resulted precisely because of supply problems. Businessmen who experienced difficulty in obtaining materials in the past may have stocked up in order to avoid being caught short at a crucial time. Another factor reinforcing this type of decision may have been the accelerating rate of inflation in the industrial materials sector in recent months, making inventory accumulation very attractive.

Farm prices decline

The sharp improvement in prices as measured in the GNP accounts (the GNP deflator) stemmed entirely from a decline in prices of farm products and a less steep rise in fuel prices. Prices of farm products declined on a broad front in the first half of 1974, and oil prices have been moving upward more gradually following the sharp jumps during the embargo. It has been apparent for some time that industrial materials are now the major cause for concern although farm product prices have shown a tendency to rebound in recent weeks.

The new statistics show that aggregate income available to consumers over the





ALL DATA SEASONALLY ADJUSTED

* ANNUAL RATES

1/ BILLION DOLLAR CHANGE IN BUSINESS INVENTORIES

past six quarters was much larger than originally estimated. Because of the method of calculating income and saving, the correction of the under-estimates in farm and dividend income show that consumers saved a substantially larger portion of their income than originally reported. The saving rate, that is the percentage of disposable (after-tax) income that was not spent, ranged from 7.5 to 9.5 percent. This compares with the previously estimated range of 5.9 to 7.3 percent.

It should be noted, however, that these are based on aggregate figures, and the imbalance in the 1973 income gains among various groups may account for some of the apparent lack of buying enthusiasm. The unusually large increases in farm and dividend income would not be expected to be spent as rapidly as gains that are distributed evenly throughout the economy.

Reasons for sluggishness

In summary, it appears the economy settled into a sluggish growth pattern three quarters before the steep first-quarter decline of 1974, which apparently was exacerbated by the oil embargo. Huge inventory accumulations may have resulted from a "control and shortage syndrome" and this may have been reinforced by rapid rises in material prices. Consumers have been saving a high proportion of their incomes—although this percentage declined in the most recent quarter—but this apparent thriftiness could be attributed to the fact that the income gains were not distributed broadly.

No resurgence of strong demand is in sight, nor is it necessarily desirable. The most beneficial developments, according to most economists, and the immediate objective, is a definite downturn in the rate of inflation. The sacrifice of some growth for a substantial downturn in the pace of inflation would be considered by many economists a rare bargain indeed.

The second quarter decline in the rate of price increase, while limited to two sectors of the economy, undoubtedly will have some favorable psychological effects, and it could turn out to be an important battle in the war on inflation.

Newsmemo

The U.S. foreign trader was the real beneficiary of a recent award to a Federal official. When State Department's Nicholas Lakas had a Commerce Department certificate personally presented to him by Secretary Dent it signaled the determination of the two departments to improve their cooperation in U.S. overseas commercial programs. Lakas, who has been in the U.S. Foreign Service in Seoul, Alexandria, Kuwait and Tripoli, now directs State's Office of Commercial Affairs. He has guided Commerce/State working groups; designed programs to aid U.S. exporters in specific foreign nations, especially those of high sales promise; placed commercial activities in a more dynamic context, and improved the reporting of overseas economic conditions by U.S. officials.

Entry of dutiable goods worth $250 or less is being speeded up by the U.S. Customs Service. Instead of completing forms, Customs employees will record the required data on invoices and special cash register tapes. Duplicate tapes will serve as receipts for duty paid. This proposed change applies both to travelers with personal importations and to commercial importers. Larger importations are handled as before. The new policy is the result of successful tests at selected entry ports along the U.S.-Mexico border. The Customs Service is on the lookout for other ways to improve its work for the business and traveling public.

Manufacturers see no easing in shortages of castings for building railroad freight cars. Castings component suppliers told a recent meeting of freight car builders that they would probably be unable to meet demands through 1975. The shortage has had two effects: production below capacity in the car building industry, and increasing attention to the U.S. market by foreign suppliers. Imports of wheels were at a $6 million rate in 1972, $7 million in 1973, and an estimated $13 million this year.

How is the consumer reacting to inflation in relation to established buying habits? A recent survey by a leading retail magazine sees four patterns of change: 1) with less purchasing power, consumers are concentrating on quality items while deciding to reduce quantities; 2) money previously spent on leisure-related goods has been curtailed as more dollars are needed for food and the basic items of living; 3) a continued shift is seen toward "do-it-yourself" purchases associated with such projects as sewing, growing and canning of fruits and vegetables, minor car and home repairs; 4) impulse buying has slackened.

A four-month delay on adoption of Federal air brake standards, sought by the Truck Trailer Manufacturers Association, has been granted. An invitation to comment on the delay got 50 respondents, only three of whom objected to the delay to Jan. 1, 1975. The three were component makers who said they could meet the earlier deadline. But the National Highway Safety Administration decided that the availability of the components was not as important as the completion of an effective anti-skid system.

Materials shortages are affecting the emergence of new ophthalmic companies and ophthalmic products. The Optical Manufacturers Association found these products in tight supply in a recent survey: polyvinyl chloride, boric acid, zinc oxide, soda ash, and solvents. The industry's requirements for such materials are relatively small in comparison to total production--1 percent or less. Thus new companies are having difficulty finding suppliers and older companies have problems increasing their allocations. As a result, new products already developed, with benefits for the public, cannot reach the market. This industry stagnation is causing an increased reliance on imports.

Newest voluntary mechanism in the business-consumer field is arbitration. Settling of disputes by resort to third-party mediation has been adopted by 80 local Better Business Bureaus. This "last resort" mechanism is used after all other approaches have failed. About 5,000 cases have been filed nationwide. Interestingly, it appears that the mere availability of the arbitration solution has prompted many of the parties to settle their differences before the mediator enters the picture. About 4,000 of the 5,000 cases have been settled prior to a hearing.

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Vol. IV, No. 22
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Michigan, Ohio, New York Lead States In Exports Of Products

Manufactured Exports, By States

		Value f.o.b. plant, 1972	*Value f.o.b. plant, 1969*	*Value f.o.b. plant, 1966*
United States	(*Millions*)	$36,808.0	$29,210.0	$21,299.2
Alabama		342.1	317.8	186.4
Alaska		(25-50)	(25-50)	(25-50)
Arizona		239.9	156.8	106.4
Arkansas		321.9	204.0	134.0
California		2,818.4	2,720.6	1,785.8
Colorado		232.8	157.0	93.6
Connecticut		868.6	659.4	489.4
Delaware		126.4	124.0	57.5
Florida		569.6	425.5	309.7
Georgia		650.9	427.9	354.5
Hawaii		(25-50)	(10-25)	(10-25)
Idaho		54.9	34.8	26.7
Illinois		2,797.0	2,343.4	1,868.9
Indiana		1,349.3	998.5	660.8
Iowa		570.2	412.0	336.9
Kansas		280.9	241.4	152.1
Kentucky		489.3	345.4	299.5
Louisiana		499.1	396.4	318.9
Maine		104.3	77.0	49.3
Maryland		342.6	361.9	236.3
Massachusetts		983.0	817.8	600.1
Michigan		3,243.4	2,613.1	1,568.2
Minnesota		638.1	492.2	326.5
Mississippi		265.2	180.8	137.1
Missouri		643.3	633.5	369.4
Montana		(10-25)	13.7	16.3
Nebraska		146.4	100.5	51.6
Nevada		7.1	(10-25)	(5-10)
New Hampshire		112.7	73.8	51.7
New Jersey		1,368.2	1,113.9	980.0
New Mexico		26.8	16.3	23.1
New York		2,864.0	2,295.7	1,837.7
North Carolina		917.0	739.0	560.1
North Dakota		15.5	6.8	3.9
Ohio		2,926.5	2,337.6	1,670.3
Oklahoma		244.8	157.7	117.4
Oregon		307.9	240.5	143.0
Pennsylvania		2,346.1	1,902.2	1,542.4
Rhode Island		152.7	110.3	91.5
South Carolina		409.1	253.5	180.1
South Dakota		17.4	12.7	8.1
Tennessee		716.1	471.5	340.2
Texas		1,836.2	1,467.8	1,099.6
Utah		115.3	48.2	57.6
Vermont		59.0	51.9	43.2
Virginia		755.9	581.2	498.6
Washington		1,494.2	954.5	602.2
West Virginia		269.1	234.9	205.7
Wisconsin		954.7	785.3	619.6
Wyoming		(1-5)	(1-5)	(1-5)
District of Columbia		18.2	14.1	10.4

Totals for Alaska, Hawaii, Montana, Nevada and Wyoming are expressed in ranges mainly to protect confidentiality of individual company reports.

Michigan rides atop the list of U.S. States in exports of manufactured products.

A newly published compilation, based on a Census Bureau survey of 1972 activity by manufacturers, credits Michigan with export shipments valued at an estimated $3,243.4 million f.o.b. factory. Ohio follows with a comparable total of $2,926.5 million, and New York, in third place, has a $2,864 million total.

Others among the leaders are California, Illinois, Pennsylvania, Texas, Washington, New Jersey, Indiana, Massachusetts and Wisconsin, in that order.

Michigan's preeminence continues to demonstrate the effect of the 1965 U.S.-Canada agreement that eliminates duties on most automotive products moving between the two countries.

A survey with State totals taken from 1969 statistics placed California in the lead, and a 1966 survey had established Illinois in the No. 1 position.

The new survey estimates that U.S. exports of manufactured products in 1972 provided 770,400 jobs, compared with 745,900 in 1971, an increase of 3 percent. In the same period total manufacturing employment increased by 1 percent, from 18,400,000 to 18,600,000.

The data are based on queries sent to about 18,200 manufacturing establishments with 100 or more employees in industries known to have significant export shipments.

The Census Bureau publication containing the figures is part of a series of Current Industrial Reports, and is entitled "Survey of the Origin of Exports of Manufacturing Establishments in 1972."

State export promotions

Increasingly in recent years the governments of most states have assisted their manufacturers with market promotion overseas. Commerce Department's Bureau of International Commerce, observing this trend, has designated the National Association of State Development Agencies as an "Export Promotion Multiplier." In cooperation with Commerce Department's District Offices, the development units of

International Promotion Programs of the States

	Int'l Dept.	O'seas offices	State DISC	'73-'74 Trade Missions	'73-'74 Investment Missions	'73 Trade Exhibitions	'73-'74 Seminars	O'seas-ads	Distribute trade leads	Obtain own trade leads	Contact visitors	Export directory	Potential exporter listing	Newsletter	Advisory Unit	Use Federal Promotion aids
ALA.	Yes	0	Yes	0	4	-	16	-	Yes	Yes	Yes	Yes	Yes	Yes	No	3 of 7
ALASKA	No	1	No	1	1	-	-	No	Yes	Yes	Yes	Yes	No	Yes	No	1 of 7
ARIZ.	No	0	No	1	1	-	0	No	Yes	Yes	Yes	Yes	Yes	No	Yes	2 of 7
CALIF.	Yes	0	No	0	2	-	20	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	2 of 7
COLO.	No	0	No	0	0	0	0	-	Yes	Yes	Yes	Yes	No	No	No	3 of 7
CONN.	Yes	0	Yes	0	1	0	0	-	Yes	No	No	No	Yes	Yes	No	6 of 7
FLA.	Yes	0	No	9	2	2	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	5 of 7
GA.	Yes	2	No	6	4	-	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2 of 7
ILL.	Yes	2	No	12	9	4	10	Yes	Yes	Yes	Yes	No	Yes	Yes	No	7 of 7
IND.	Yes	0	Yes	3	6	1	12	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	6 of 7
IOWA	Yes	0	Yes	0	1	3	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	6 of 7
KANS.	No	0	No	0	2	1	0	No	Yes	No	Yes	Yes	No	No	Yes	1 of 7
KY.	Yes	0	No	-	2	2	3	Yes	Yes	Yes	No	Yes	Yes	No	Yes	2 of 7
LA.	Yes	0	No	0	5	0	0	Yes	Yes	Yes	Yes	Yes	Yes	No	No	1 of 7
MAINE	Yes	*	No	3	3	0	12	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	4 of 7
MD.	Yes	1	No	3	2	0	12	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	6 of 7
MASS.	Yes	0	Yes	3	4	1	4	No	Yes	Yes	Yes	Yes	Yes	Yes	No	6 of 7
MICH.	Yes	2	No	1	2	0	10	Yes	Yes	Yes	Yes	Yes	Yes	No	No	6 of 7
MINN.	Yes	0	Yes	3	6	1	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	6 of 7
MISS.	Yes	0	No	4	2	2	18	Yes	Yes	Yes	Yes	Yes	Yes	No	No	5 of 7
NEBR.	No	0	No	0	1	0	5	No	Yes	No	Yes	Yes	Yes	Yes	Yes	3 of 7
N.J.	Yes	0	Yes	0	0	0	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	4 of 7
N.M.	Yes	0	Yes	7	0	1	18	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	0 of 7
N.Y.	Yes	2	Yes	1	2	0	31	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	5 of 7
N.C.	Yes	*	No	1	2	0	33	Yes	Yes	Yes	Yes	Yes	Yes	No	No	5 of 7
OHIO	Yes	1	No	2	4	1	37	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	6 of 7
PA.	Yes	1	No	0	2	0	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	5 of 7
P.R.	Yes	3	No	9	11	10	20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2 of 7
R.I.	No	0	No	-	-	-	-	No	Yes	No	Yes	No	Yes	Yes	No	3 of 7
S.C.	Yes	2	No	1	3	0	-	Yes	Yes	Yes	Yes	No	No	Yes	No	4 of 7
TENN.	Yes	0	No	1	2	0	1	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	4 of 7
UTAH	No	0	No	1	-	1	-	No	Yes	No	Yes	No	No	Yes	Yes	1 of 7
VT.	Yes	0	Yes	2	2	0	2	No	Yes	Yes	Yes	Yes	Yes	No	No	3 of 7
VA.	Yes	1	Yes	0	2	0	0	No	Yes	Yes	Yes	Yes	No	No	Yes	3 of 7
WASH.	Yes	0	Yes	4	1	2	4	No	Yes	Yes	Yes	Yes	Yes	Yes	No	3 of 7
W. VA.	No	0	No	0	2	0	1	Yes	No	Yes	Yes	Yes	No	Yes	No	1 of 7
WIS.	No	1	No	0	3	1	-	Yes	Yes	Yes	Yes	No	No	Yes	Yes	5 of 7

Table is based on replies to a January 1974 questionnaire by the National Association of State Development Agencies, 1925 K St., N.W., Washington, D.C. 20006.

The seven Federal promotion aids alluded to in right hand column are: Overseas Market Reports, Trade Missions, Trade Shows, Catalog Shows, Investment Seminars and Trade Opportunities, all by the U.S. Dept. of Commerce, and exhibitions of the U.S. Dept. of Agriculture.

*Use consultants.

41 states now participate in the Multiplier program, relaying to their businessmen the overseas market information and assistance of the Commerce Department.

The Development Agencies association this year conducted a survey of the State units in order to evaluate the scope of the various programs and to provide suggestions for new approaches and techniques based on the experiences of fellow States. A total of 36 States and Puerto Rico supplied detailed information on their programs (see table above). This response covered most of the States with significant international business interests, either in trade or investment.

Eight of the States maintain European promotion offices in Brussels, and six explore Asian markets from Tokyo. Twelve DISCs—Domestic International Sales Corporation—exist as cooperative State-industry ventures. There are 30 trade missions planned for 1974 by 18 States, and 37 missions seeking overseas investments are being prepared this year by 25 States. State-sponsored trade seminars grew from 135 in 1973 to a planned 181 this year.

More than half of the responding States advertise overseas to promote trade or investment. Almost all are busy gathering and distributing trade leads to their producers and marketers. About three-quarters publish directories of exporters or manufacturers, and a similar number publish foreign trade newsletters.

On use of promotional aids of the Federal government—seven were mentioned in the survey questionnaire—only one State responded negatively and most were using four, five or six of the offered forms of assistance. The State development units commented that their contacts with Commerce Department District Offices are growing more productive.

Presidential Unit Meets

The President's Export Council, established by President Nixon in December 1973 to advise him on export expansion activities, held its second meeting July 18 in Washington.

The meeting, held to discuss the status of various Council studies on ways and means to increase U.S. exports, was chaired by Fletcher L. Byrom of Koppers Company, Inc. Such topics as export financing, export controls, taxation problems and the effect of U.S. antitrust laws on exports were explored.

Government officials participating included Secretary of Commerce Frederick B. Dent, Deputy Secretary of State Robert S. Ingersoll and Export-Import Bank President William J. Casey.

Hoover's Standards Efforts Vital Today, Centennial Reminds U.S.

(See also "From The Secretary" on inside front cover of this issue.)

The centennial observance of the birth of Herbert Clark Hoover this month is an occasion of special significance to the Department of Commerce. For it was here, as Secretary of Commerce 1921-'28, that the man who later became the 31st President of the United States achieved some of his most notable contributions to the national well being.

During his tenure as Secretary, Mr. Hoover's creative energies were devoted to a multitude of activities covering the whole range of the nation's commercial and industrial development. These included rejuvenation of America's foreign trade, reduction of labor-management conflicts, improvement in railroad and water transportation, prevention of industrial and traffic accidents through application of scientific principles, increased production of electricity, development of the new invention radio, and promotion of business ethics.

But of all his achievements, none has had a more lasting effect, none has contributed more to the material progress of all Americans than his efforts on behalf of industrial standardization. For the progress he achieved in this field helped lay the foundation for the economies of mass production that are the basis for our standard of living.

Double interest

Mr. Hoover's interest in standardization sprang from both his training as an engineer and the keen sense of humanitarianism that stemmed from his Quaker background and was heightened by his experience in Belgium relief work in World War I.

As an engineer, he was thoroughly familiar with the waste and inefficiency caused by the unnecessary variety in shape, size, classification and other characteristics of the multiplying number of products and processes in American industry. And as a humanitarian, he correctly perceived that the elimination of waste would benefit all Americans through the lower prices that increased productivity makes possible.

Working through the Commerce Department's National Bureau of Standards, Mr. Hoover launched a program that enlisted the voluntary cooperation of scores of industries in solving problems of simplification and standardization. More than 3,000 conferences of industry representatives were held under the program, and standard sizes were set for everything from grocers' paper bags to automobile brake lining.

Although Mr. Hoover was dealing directly with industry in this undertaking, he always knew that the ultimate

WELL-USED DESK — *Herbert Hoover's activities as Secretary of Commerce dealt with the full range of the nation's commercial and industrial development. His strong interest led to important gains in the area of industrial standardization.*

A MAN OF HIS TIMES — *As Secretary of Commerce, Hoover encouraged innovation and promoted standardization which would put technical breakthroughs to practical use. Above, he listens to an early radio.*

APPRECIATION — *As he completed a lifetime of service to his country, the former President and Commerce Secretary was honored repeatedly for his efforts.*

beneficiary was the American consumer. He stressed this theme in responding to the presentation to him of the Howard Coonley Medal of the American Standards Association (now the American National Standards Institute) in 1951.

The citation that accompanied the award read as follows:

"In all America, no great and honored name is more closely associated with the harmonious integration of human activities that is called standardization. As an engineer, as a public servant rising to the highest office of the land, as a private citizen working in the public interest, he has for more than half a century labored to reduce waste, improve efficiency, and increase production through standards. Stimulating and encouraging the study of waste in industry, he directed the attention of our people to the need for a national program of voluntary standardization. As Secretary of Commerce, he gave impetus to a growing movement by creating the Division of Simplified Practice, whose work he furthered as thirty-first President of the United States. As Chairman of the greatest effort ever made to plan an efficient, economical government reorganization, which has universally come to bear his distinguished name, he called the attention of the world to standards as a key to administration. No American has done more to bring his fellowmen order, harmony, and riches through the liberating forces of standards."

Response by Hoover

In his acceptance speech Mr. Hoover declared:

"Standards are at the base of all mass production. They make possible more continuous employment by manufacture for stock instead of dependence upon immediate and specialized orders. They have made it possible to conduct this fabulous productive machine with the least amount of spare parts and inventories in the hands of the consumer industries. They have sharpened competition. They have cheapened the cost of production in millions of directions. Thus, they have been a factor in our rising living standards. They have enabled thousands of different articles to be placed within the reach of everybody. They do not impose uniformity on the individual, because they make available to him an infinite variety of additions to his living."

So Mr. Hoover started his professional career as a mining engineer and before it was over he became a standards engineer as well. In whatever capacity he served, as a Cabinet Officer, as President, or as an engineer, Herbert Clark Hoover worked untiringly for the betterment of his country and the improved well being of all our citizens. One of his monuments is his work in industrial standardization—an achievement that will live as long as a manufactured article is produced in these United States.

Jobs, Enterprises For Indians Aim Of Federal-State Program

A far-reaching program has been developed to locate new business enterprises among the 40,800 Indians of South Dakota, and to improve their economic condition, with the ultimate objective of establishing full employment among them and making them self-supporting.

This objective is the purpose of a $206,517 grant recently made by Commerce's Office of Minority Business Enterprise (OMBE) to the South Dakota State Indian Business Development Organization (SIBDO). The grant will be matched by $204,599 of South Dakota State funds, of which $202,796 will be in cash. SIBDO management and staff are all Sioux Indians of proven competence in Indian business development.

Of the State funds, about $100,000 will be used for equity grants to Indian businesses. This money will be expended only if complemented by commercial bank or federal loan financing. Federal loan sources would include Commerce's Economic Development Administration (EDA), the Small Business Administration (SBA) or Agriculture's Farmers Home Administration (FHA).

Since the State of South Dakota is a joint partner in sponsoring SIBDO, State officials charged with responsibility for the investment of State funds have indicated an interest in using surplus funds as a source of prime rate debt financing for State Indian business enterprise. At the initiative of the OMBE Indian Office, State SBA officials have shown a willingness to provide guarantees for repayment of 90 percent of State business loans to Indians, which will make the loans attractive to commercial banks.

Supported by various financing sources, the expectation is that the $100,000 of State funds for equity grants can be leveraged upward to as much as $675,000 to finance Indian business enterprises.

The South Dakota program is the first of its kind developed by OMBE. The agency's officials hope, however, that it will catch on, and that similar projects can be carried out in a number of other states with significant Indian populations, such as North Dakota, Montana, Minnesota, Wisconsin and Michigan.

"OMBE has undertaken to bring to the Indian in his own community the skills and opportunity to participate in business," says Alex Armendaris, OMBE Director. "To do this, we have joined our resources with SIBDO in a program that I hope other states will follow."

Armendaris explains that C. Lawrence Huerta, a member of the national Indian Office staff, is on a two-year assignment to the Navajo Community College in Arizona.

"It is anticipated," he adds, "that this unit of the Navajo college will become a national center for information on Indian business development techniques and research."

Donald Loudner, Director of SIBDO, South Dakota Governor Richard F. Kneip, Jack Allmon, South Dakota Secretary of Economic Development, and Senator Harold Schreier and his colleagues on the Joint Appropriations Committee of the State Legislature, were responsible for getting the State involved in Indian business enterprises. U.S. Senator James G. Abourezk and U.S. Representative James Abdnor of South Dakota were active in bringing the State and OMBE together in support of the SIBDO concept.

Joseph Vasquez, director of OMBE's national Indian Office, explains that the basic aim of the program is to make the Sioux Indians in all nine South Dakota reservations, as well as the urban Indians, self-supporting. The money thus far provided, he adds, is the first installment in this effort. A collateral purpose, he points out, is to reduce unemployment among the South Dakota Indians and to eventually establish something approaching full employment.

This is a big undertaking, because Vasquez recalls that unemployment on the Yankton Reservation in South Dakota was 77 percent last fall.

Vasquez comments that the Indian is

MOCCASIN MAKER — *An Oglala Sioux owned-and-operated plant on the Pine Ridge (S.D.) Reservation turns out moccasins that are sold worldwide. Here, a worker molds the final shape of the moccasin by beating it with a rod to smooth out the leather and stitching.*

rich in resources and poor in capital funds. Indians, he says, control 2.6 percent of the land of the nation, scattered in parcels, and yet an area equivalent to about one and one-half times the size of the State of Georgia.

The South Dakota project, he explains, embraces about 10 million acres, an area of more than 15,000 square miles, or more than 20 percent of the State's land area.

"So far as economic development is concerned," he says, "the Indians have a major advantage. They have plenty of land. They grow all of their feed."

From the standpoint of capital funds, however, the Indian businessman is rated as the most "equity poor" of the minority businessmen of the nation. Experience has shown a large number of loan refusals because the Indian entrepreneur had no front-in equity capital to support the debt-equity financing ratio required to secure commercial bank or federal business debt financing.

Vasquez points out that, since the Indian land is reservation land, the Indian businessman cannot put it up as collateral for a loan.

Richard Hopewell, Field Officer of the OMBE Indian Office located in Sioux Falls, South Dakota, says it is highly significant that the State Legislature agreed to match the Federal contribution toward the project almost dollar for dollar, and to put up nearly all of the money in cash, with $100,000 earmarked for equity grants.

Traditionally, he says, Indians have been looked upon as a federal responsibility. Reservation land is a federal sovereignty over which the States have no civil or criminal jurisdiction. It is not subject to state taxation, and thus improvement of the land would not enlarge the state tax base.

"The South Dakota Legislature," Hopewell explains, "acknowledged that despite the lack of any immediate financial benefit of the program to the State, it had an abiding interest in the welfare and economic advancement of the Indians residing within its midst.

"This is a new and hopeful development, and if the legislatures of other States in which Indians live will adopt a similar attitude we shall be on the way to bringing the great majority of Indians into the mainstream of American life, employed and self-sustaining."

The South Dakota project has two basic purposes, one of an immediate nature and the other long-range.

The immediate purpose is to supply capital and technical assistance requirements of Indians who already are in business or who wish to start and own a business. These would be small businesses devoted to providing the basic necessities of life, such as a grocery store, gasoline station, and the like.

In a case of this kind, SIBDO would make a grant of from 10 to 20 percent of the amount of money necessary to finance the business project, and the remainder would be advanced in the form of a guaranteed loan.

INDIAN ENTERPRISE — *An Indian worker at a pork processing plant on the Yankton (S.D.) Reservation weighs byproducts, which are sold to local farmers and companies.*

The individual businesses that would be financed in this manner would be in a large degree "mom and dad" enterprises. While they would provide some employment, they would hardly scratch the surface of the 50 to 75 percent jobless rate of the South Dakota Indian communities. To attack and try to reduce such high unemployment rates, the long-range aspect of the program would have to be invoked.

The basic framework of this phase is a research and long-range planning effort aimed at the solid development of Indian owned-and-controlled agri-industrial enterprises which would be sufficiently labor-intensive in nature as to offer hope of cutting down the unemployment rate and leading ultimately to full employment of South Dakota's Indians.

Cattle raising prime factor

Vasquez explains that the trend in Sioux agriculture is toward cattle raising, and thus cattle doubtless would be a major factor in long-range economic development.

As a result, a meat-packing plant could be established, and in turn a hide-processing facility and a shoe-manufacturing plant. Such facilities would provide jobs for Indians.

An example cited of the kind of agri-industrial enterprise that might be developed is a pork-processing plant on the Yankton reservation. This plant went into operation in February, and is doing well, with sales orders on its books to leading grocery outlets.

Another example is a facility on the Pine Ridge Reservation engaged in making moccasins that are being sold in all parts of the world.

Hopewell says the plan is to go to each reservation and work out with the Indian Tribal Council leaders a long-range plan for the development of agri-industry. It is anticipated that the FHA would participate in financing such projects.

Another phase of agri-industrial development would be building up the productivity of the land so that seven to 10 acres would produce what 40 acres are required to produce now. In this connection, the Dow Chemical Company has agreed to work with SIBDO in initiating and developing a system whereby franchised Indian contractors would be trained and qualified in the application of the most advanced chemical technologies for land reclamation, improvement, and maintenance.

Subject to SIBDO's development of valid forecasts as to increased cattle productivity on South Dakota Indian reservations, John Morrell and Company, one of the nation's top five meat processors, has agreed to consider sponsoring Indian owned-and-managed meat processors.

Under similar conditions, other leading corporations have indicated a willingness to consider sponsoring Indian agri-industrial enterprises.

SIBDO is looking to collaboration with the Upper Mid-West Council, a group representing leading industrial enterprises in that region, banks, and other business leaders, in furthering the program.

Hopewell says the Council would undertake to organize buyer outlets for Indian products, and also to assemble retired executives to manage Indian enterprises and to train Indian staffs to take over the management tasks when they were ready to do so. The Council presumably would set up an affiliate corporation for the task.

One favorable aspect of the program is the number of young Indians who are eager to get going with the effort.

Energy Management Digest

PENNEY'S SAVINGS MEAN PENNIES EARNED... J.C. Penney reports its energy conservation efforts have produced a saving of the equivalent of 250,000 barrels of oil. The savings were made without cutting store hours or operating efficiency, through such simple measures as lowering store thermostats to recommended levels, demonstrating only two television sets in each TV department, and by removing excess light bulbs and reducing illumination. The firm's management plans an even more aggressive program aimed at saving the equivalent of an additional 900,000 barrels of oil, and feels that even these substantial energy cuts can be made without limiting store hours.

BUSES CATCH ON...An experiment designed to increase public transit usage because of the energy shortage is alive and well in northern Virginia. A National Bureau of Standards report, prepared for the Department of Transportation's Urban Mass Transportation Administration, finds continued success for an experimental express-bus service shuttling commuters into Washington, D.C. from suburban northern Virginia, and suggests possible applications in other cities seeking answers to the energy shortage. Prepared by NBS' Technical Analysis Division, the report found the bus share of daily traffic flow increased from 27 to 40 percent since an express bus-only lane was installed on Shirley Highway, a major artery into Washington, in 1969. NBS researchers found that approximately 5,000 automobiles have been removed from the daily rush hour since the beginning of the experiment in 1969. This decrease has resulted in reduced auto pollutant emissions (carbon monoxide emissions dropped by 1,950 tons, for example) and a saving of approximately two million gallons of gasoline over the four-year period. Commuters who switched from autos to buses reported that service and comfort features were the primary reasons for their move to public transportation. These included reliability of the service and convenient arrival and departure schedules. Adequate air conditioning and heating were the most important comfort features. The project also reported some financial successes. Although rush hour service had always been profitable, for the first time, during the last half of 1972, the project reported a net surplus for combined rush hour and non-rush hour operations.

OUT OF SIGHT IS NO BIND...During the Second World War, major naval battles were fought for the first time without the opposing fleets ever coming in sight of one another. Now, officials of a Connecticut banking firm are holding "meetings" while 40 miles apart. To save gasoline resources and executive travel time, Union Trust Company has installed a novel telecommunications system which enables the firm's executives at its major facilities in Stamford and New Haven to conduct meetings with each other without ever leaving their respective offices. The system, developed through the Department of Housing and Urban Development, uses special acoustic technology to substitute for face-to-face meetings. Leased telephone lines link the communications terminals at both locations with specially connected microphones for each participant in a teleconference. The electronic linkage provides discrete sound images at each location for each conferee. As a participant talks at one location, his associates at the other location are able to identify him through the sound-imaging techniques and the stereophonic qualities of the system. "There is a definite inclination to stick to the prepared agenda and to relevant discussion," says Union Trust President Thomas F. Richardson, "thus shortening meetings. Also, we estimate conservatively that over the next twelve months 1,000 executive man hours in travel time will be saved, as will 11,000 auto miles."

LOOKING AHEAD...A company policy of assuring future energy resources by investing in other countries seems to have been one of the chief factors behind West Germany's largest steel company's recent announcement that it will invest about $40 million in a coking coal field near Beckley, West Virginia. August Thyssen-Huette (ATH) may export the field's projected annual production of 1.3 million tons to its steel mills in France and Brazil.

Weights, Measures Group Pledges Aggressive Action Toward Metric Changeover

The 59th annual National Conference on Weights and Measures pledged to take an active role in preparations leading to the adoption of the metric system by the United States, rather than merely helping coordinate in areas where movement is already taking place.

The Conference's Committee on Laws and Regulations adopted the following official metric symbols: meter—m; millimeter—mm; square meter—m2; liter—l; gram—g; and kilogram—kg.

The week-long meeting, held in Washington in early July, was attended by 498 delegates from 45 states, Puerto Rico, the Virgin Islands, and the District of Columbia. Six representatives of foreign governments were present.

The Conference was sponsored by the Office of Weights and Measures of Commerce's National Bureau of Standards.

Drift, fears were topics

A major topic of the Conference was the nation's drift toward the metric system and the implications for weights and measures authorities.

John H. Lewis, outgoing Conference chairman, urged a calm approach towards changeover from the traditional to the metric system. Weights and measures officials will need, he said, to "calm the fears" of the average person during the changeover period. Lewis is chief of the weights and measures section of the Washington State Department of Agriculture.

Action was taken at the Conference to give American consumers renewed assurance that glassware and paper products purchased by them would conform to proper standards.

In cooperation with the American Glassware Association, the Conference defined allowable tolerance limits for glassware. For example, pressed and blown tumblers and stemware are permitted a one-fourth ounce tolerance up to a glass of five ounces capacity. Above five ounces, manufacturers must produce glasses with a five percent tolerance. Similar tolerances were set for bowls, blenders, pitchers, dessert and soup bowls, casseroles, loaf pans and roasters.

Working with the American Paper Institute, the Conference set the allowable difference between actual and declared dimensions for paper towels, paper napkins, and facial tissue to be plus or minus one-eighth inch. For toilet tissue it was set at plus or minus one-sixteenth inch.

Dr. Betsy Ancker-Johnson, Assistant Secretary of Commerce for Science and Technology, in a keynote address, referred to the Conference as "one of the models of cooperative effort among federal, state and local governments."

"A success model like this Conference," she said, "is one of the examples to which the Department of Commerce points with pride when the philosophy of the 'New Federalism' is discussed."

She described the "New Federalism" as recognition of the different roles appropriate to each level of government, and a realization that it is not always necessary or efficient to use direct national action to achieve national goals.

Dr. Ancker-Johnson emphasized that government units at all levels need greater cooperation to meet the complex needs of a technological society. One resource to meet these needs is the system of federal research laboratories, she told the delegates. She noted that Department of Commerce laboratories in general and those of NBS in particular are well experienced in cooperating with state and local governments.

"In fact," she said, "the National Conference on Weights and Measures and its close relationship with NBS is a model which other federal laboratories should use."

The Conference also accepted the first census ever made of the weights and measures system in this country. A summary of the census was distributed to delegates by the Committee on Education, Administration and Consumer Affairs. A personnel survey of people in weights and measures activities, it contains the number of people, their duties, titles, status of employment and average salaries.

The second phase of this census, expected to be delivered at an interim committee meeting in January, will summarize physical space allocations, equipment resources, types of programs, and laws and regulations of weights and measures offices across the country.

The primary objective of the survey is to document the personnel and physical resources in the field of weights and measures in order to promote more effective planning.

The Conference defeated a proposal to adopt a three-quart milk container as a standard package size. The delegates accepted the argument of John Speer, of the Milk Industry Foundation, that definite action at this time "would be premature" until there is a clear picture of the impact on the market place.

Speer noted that the sale of milk is already heavily regulated at the state level.

"You have to be very careful when you amend this fluid milk document," he said.

The International Paper Company, producer of paperboard cartons, requested that the three-quart container size be approved. Joseph Cannon, a spokesman for the firm, said that a container of this size would reduce material needs by 15 to 20 percent.

"Paperboard is in short supply throughout the world, and will be for the next three years," he said. "We need this. We need it desperately."

In its tentative report, the Committee on Laws and Regulations indicated that the present was the wrong time to approve a three-quart size, since the committee had already taken an advocacy position on going metric. This is "a sensitive issue with consumer groups," the committee noted. Adoption of the proposal, it said, could be construed as an undue proliferation of package sizes.

"The consensus of the committee," the report explained, "is that it should not oppose this request at this time, but that it should be brought to the floor for a vote without a committee endorsement."

The Conference tabled for one year action on a proposal to insure uniformity in unit pricing, urged completion of studies now under way before endorsing the sale of eggs by weight instead of by count, and tabled indefinitely a proposal for a model state menu regulation for "fast food" restaurants, delicatessens and super markets.

Industry Highlights

Power Breakdowns Costly To Users Of Computers

(Industry Highlights is prepared by the Office of Business Research and Analysis, Bureau of Domestic Commerce.)

The capabilities of the computer are now basic to many businesses and crucial to their growth and viability. A recent publication from Commerce's Bureau of Domestic Commerce describes the possible economic effects electrical power variations can have on computers, and the steps computer users can take to avoid these problems.

Computers are very sensitive to the quality of the electrical power they receive. Even before the energy crisis emerged, there was ample evidence to suggest that the characteristic fluctuations inherent in utility-delivered power could cause a variety of problems. Now that the energy crisis is upon us, these problems could be exacerbated throughout the country by brownouts and blackouts resulting from power shortages.

Typical electrical power requirements of computers, measured at equipment connections, are usually stated in terms of four different aspects of AC voltage: steady state voltage, transient voltage, voltage continuity and frequency. Because of the meshing of many local utilities into regional power nets, frequency is normally not a problem for computers.

Typical steady state voltage requirements for computers are 120/208 volts ±10 percent. Due to possible voltage drops along the line between the service entrance of a building and the equipment connections, the steady state voltage can drop 9 percent by the time it reaches these connections. This tends to be more characteristic of computer installations in older buildings than in newer sites.

Large loads' impact

In addition, large loads such as air conditioners coming on line can drive the voltage down 20 percent or more for 30 milliseconds, which exceeds most computers' tolerances of dips or surges. Finally, normal power net switching by local utilities can account for from 30 to several hundred outages per year, each lasting over one second, easily exceeding the typical computer limit for complete voltage loss of 15 milliseconds.

The results of these voltage excursions can be output errors, unscheduled computer shutdowns, loss of information and equipment damage. To the computer user, these can mean the high costs of computer downtime, recovery and reruns, and perhaps equipment replacement. Over the span of a year, for example, one large government computer facility estimated its annual costs due to power disturbances as $60,000. Other studies have reflected even higher costs at various sites, some totaling $100,000 to $150,000.

Computer users in areas like New York City have had problems of summer brownouts and blackouts overlaying any difficulties they might experience with electrical power as described above. Other sections of the country may begin to experience these additional problems of brownouts and blackouts because of the energy crisis.

Because brownout conditions are planned reductions by local utilities of voltages at utility generating points, usually in steps of 3, 5, or 8 percent, these reductions can decrease a computer's steady state voltage below its lower limit, or place a computer in a more vulnerable position with regard to transient voltage downsurges.

Unscheduled blackouts are seen as voltage discontinuities by computers, and thus can be particularly damaging and costly. Scheduled blackouts, given adequate lead-time by local utilities, should not result in equipment damage or computer output errors. However, it is possible that repetitive powering up and down of computers can cause shortened component life, which, in turn, can cause unexpected shutdowns and errors.

The computer user faced with these uncertainties fortunately does have recourse to various types of power regulation devices which will maintain computer operations in the face of a broad variety of disturbances from transients to complete outages. Users will undoubtedly opt for the amount of protection which matches their dependence upon the continuation of their system's operation.

Protection against voltage transients can be provided by the mechanical inertia of motor-generator sets (M-G sets) and by their electronic analogues, line conditioners. Whereas M-G sets cannot protect against brownouts, line conditioners and voltage regulators can.

Uninterruptible power supplies (UPS) are the only devices available which offer complete protection against both brownouts and blackouts. This equipment utilizes float-charged storage batteries to ensure instantaneous response to power reductions or discontinuities. UPS systems usually provide sufficient power to allow an orderly shutdown of a computer system or the transition to on-site power generation equipment, such as diesel generators.

The cost of installing some degree of protection into a computer system varies with the capability of a given device to deal with power problems. Most manufacturers of back-up and conditioning equipment state the costs to the customer in terms of dollars per kilovolt-ampere (KVA). The unit cost of a device varies inversely with the size of the computer system to be protected. Thus, line conditioners for computers ranging from 0.5 to 5 KVA can cost from $700 to $300 per KVA. An UPS system (without diesel back-up) could cost around $1000 per KVA for small computers, and $600 to $400 per KVA in the range of computers 200 KVA and above.

The report offers the suggestion that the first step for users to take in examining their individual situations is to determine accurately the level of voltage their computers are receiving. If possible, users should monitor incoming power to their computers over a period of time with instruments sensitive to rapid voltage transients. These examinations should be conducted in concert with the user's equipment vendors and representatives of the local utility to determine the scope of any problems and subsequent solutions.

A copy of this report, "The Effects of Electrical Power Variations upon Computers: An Overview," can be obtained for 55 cents from the Government Printing Office, Washington, D.C. 20402. The GPO stock number is 0325-00022.

Publication Examines Computer Security

Can data in a computer system be completely protected? The answer is "No" according to "Executive Guide to Computer Security," a new publication of Commerce's National Bureau of Standards.

The "Executive Guide" is a 16-page primer consisting of 37 key questions and answers designed to acquaint the nation's executives with safeguards and procedures to assure protection of computerized information. Queries are directed at costs and benefits of computer security, priorities, devices, problems and solutions.

The material in the guide was drawn from the report of a workshop on controlled accessibility attended by top technical experts in the field of computer security.

Copies of the "Executive Guide to Computer Security" may be obtained in limited quantities from the Systems and Software Division, Institute for Computer Sciences and Technology, National Bureau of Standards, Washington, D. C. 20234.

The "Controlled Accessibility Workshop Report" has just been published as NBS Technical Note 827. The report outlines the goals and purposes of the workshop and summarizes the discussions of the five working groups. Printed copies of NBS Technical Note 827 may be ordered prepaid for $1.25 and by SD Catalog No. C13.46:827 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Nine States Will Split $3 Million In Grants For Coastal Management

The State of Washington will use some of its $388,820 federal grant to assess the capability of its shorelines to accommodate various forms of development and to study mineral extraction processes. Washington is one of nine states that will share grants totalling $3,080,870 from Commerce's National Oceanic and Atmospheric Administration (NOAA) to assist in developing programs to manage their coastal lands and adjoining waters. The grants are made under the Coastal Zone Management Act of 1972, which is designed to ensure national and regional cooperation in achieving a balance of resource use and conservation along the United States' sea coasts and Great Lakes' shores.

The states and the amounts they are receiving are as follows: California, $720,000; Florida, $450,000; Hawaii, $250,000; Maryland, $280,000; Michigan, $330,486; Mississippi, $101,564; Ohio, $200,000; Texas, $360,000; and Washington, $388,820.

Matching funds mandatory

The grants carry a matching-fund provision in which the recipient is required to furnish at least one-third of the funds for the program.

California's one-year work program involves five state departments, two universities, and seven other commissions and councils. It is designed to take into account the needs of coastal land environment, energy, recreation, design, transportation, geology (including non-petroleum minerals), and the marine environment. Work previously carried on by the state's two Sea Grant programs will also be utilized.

During its initial year of coastal management studies, Florida will make a detailed bio-physical analysis of preservation, development, and conservation areas on a regional basis. This will include such factors as ecological significance, soils suitability, susceptibility to flooding, geology, water quality standards, present land use, archaeological and historical significance, unique features, and agricultural suitability.

Another task will be to determine the carrying capacity of the land and support services for unincorporated areas on a regional basis. An inventory of man-induced coastal problems and conflicts will be made and the state will examine existing legal authority over land and water uses on a regional basis.

Hawaii's first-year work program includes a study of inland boundary alternatives; a description and analysis of uses permitted by federal, state, and local laws and ordinances; the inventory, mapping, and categorization of land and water uses; the development of basic data, analyses, and criteria necessary to identify geographic areas of particular concern; and a legal analysis of alternative land and water use control mechanisms; and a determination of state and county interests, and objectives in the preservation, conservation, and orderly development of specific coastal zone areas.

In the first year of the program, Maryland's coastal zone management staff will collect and assess data on coastal resources and uses. A wetlands study will refine existing information and map the abundance, location, and specific biological functions of various wetland areas throughout the state. An archaeological resource management study will determine the locations of prehistoric coastal sites and develop guidelines for their preservation.

Other projects to be started during the first year of the grant include new and revised shore erosion and shoreline geomorphological mapping, a study of critical coastal zone resources, habitats, and landscapes which will identify non-tidal wetlands, endangered fish, wildlife and plant habitats, prime agricultural areas, areas suitable for recreational activities, rivers suitable for inclusion in the state's Wild and Scenic Rivers Program, and other upland areas which have significant influence on coastal resources or processes. Finally, a study will be conducted to assess the impact of recreational boating facilities on the surrounding land and water areas.

The first "inland" state to be awarded a coastal zone grant, Michigan will use the initial funds in a two-year project to formulate a comprehensive program for the management of the state's Great Lakes shorelands. Among the studies planned to assist in the creation of this management program are those involving the definition of the shoreland zone boundary, an inventory of lake use, ownership, and other characteristics, a practical data management system, a navigation needs study, and the involvement of regional planning agencies.

The Mississippi Marine Resources Council will coordinate the contributions of seventeen state agencies, offices, and local organizations during the preparation of the management program, which is designed to produce an approvable program in three years. The first year's work will concentrate on identifying all the state activities and agencies bearing on the coastal zone, achieving full coordination of activities at the local and regional levels, and obtaining the data necessary to develop a coastal zone management program.

Ohio's first year of work on the program will include an area resource analysis which will inventory the resources of the Ohio shore zone and assess the economic, social, and environmental implications of uses of these resources. Another study will involve an anlysis of the legal and administrative arrangements underlying state, regional, and local planning programs currently in effect in Ohio, and the development of recommendations regarding legislative and administrative changes which will be required to implement the Ohio Lake Erie Shore Zone Management Program.

Texas will be involved in three initial inventories: an inventory of groups with interest in coastal zone management, an investigation of present coastal zone management authority, and an inventory of existing data on all aspects of the Texas coastal zone. The grant will also be used to initiate or continue technical studies which will examine coastal zone developments of statewide concern, identify coastal resource demands, assess resource capability, and determine alternative institutional mechanisms through which coastal zone objectives might be gained.

The state of Washington has earmarked the first year of grant funds for the collection and compilation of basic shoreline data to define the present nature of the state's marine waters and related lands, and a number of study and analysis projects to better understand coastal processes and interrelationships. Also, geographical areas of critical environmental concern will be identified and designated for more detailed inventory and analysis, and mineral extraction processes will be studied.

Most of the recipients are including public information and participation programs in their plans.

Chicago Stockyards Area To Get Boost From Loan

An effort to create jobs and stimulate long-range economic growth in the Stockyards area of Chicago will get a helping hand from Commerce's Economic Development Administration in the form of a $2.5 million loan.

The loan, to the Kelaron Corp. of Chicago, will be used to help construct a meat-processing facility and freezer warehouse. The company will operate the freezer warehouse and will lease space in the building to meat-processing firms. Enterprises in the new building are expected eventually to employ some 150 people, most of them residents of the Stockyards neighborhoods where unemployment is high.

Private financing, the Chicago South Central Industrial Development Corp. and Kelaron will make up the remainder of the $6,250,000 total cost of the center.

Eight Areas Get Loan Assistance For Economic Development Plans

You're never so good that you can't get better! When unemployment in the Niagara Falls area jumped sharply with the recent closing of a power plant, the City Fathers fell back on a tried and tested remedy, tourism, to take up the slack.

Despite its status as already being one of the world's most visited places, Niagara Falls is establishing an economic development center for tourism in an effort to attract still more visitors. The Society for the Promotion, Unification and Redevelopment of Niagara will use a $30,000 grant from Commerce's Economic Development Administration in a program that will include job training and multi-lingual language training to offer special services to foreign as well as American visitors. SPUR is analyzing the activities of other successful tourist centers in the country in order to apply similar techniques to Niagara Falls.

Another tourist attraction, American Samoa, has also benefited from a recent pair of EDA grants totaling almost $54,000. The island government's Development Planning Office and the Economic Development Committee for American Samoa are both undertaking long-range planning efforts to overcome chronic unemployment by making the area more attractive to industry and tourists.

American history is also getting a helping hand from EDA, in the form of $376,000 in grants to restore a historic whaleboat tanker in Superior, Wisconsin, and the historic Wulff Mansion in San Antonio, Texas. Both projects will provide immediate jobs in areas of high unemployment and provide economically stimulating tourist attractions when completed.

Seattle, Washington, has received one of the larger EDA grants, $765,000, to provide addition improvements to the King County Stadium now being built in that city. Major features of the project include installing a utility tunnel, revising the floor design and providing for rolling up the turf. County officials report that the project will make possible the staging of trade fairs and conventions at the stadium, in addition to year-round sporting events.

Eighteen Mississippi counties may get a better diet as well as an expanded industrial base through a $45,000 EDA grant to help plan the establishment of a regional industry to produce high-protein food from soybeans in the Mississippi Delta. The Jackson-based Mississippi Research and Development Center will use the grant for studies of regional food production, processing and marketing, and to prepare an overall plan for an integrated food industry in the Delta.

The Ozarks Regional Commission recently added $100,000 to the $476,000 already contributed by EDA to help finance a modern public terminal in the industrial area of the Mississippi River port of Lake Providence, Louisiana. The project also involves expansion of cargo loading facilities, furnishing water, and expanding railspur and access roads.

A Huntington, New York, firm has received a $34,600 EDA grant to study the design of a commercially-feasible oyster-shucking machine...and, if feasible, to build it. Marine Culture Systems says that an automatic shucker could help revitalize the nation's shellfish industry. The firm reports a growing shortage of skilled hand-shuckers in fishing communities. The corporation will repay the federal funds if the project results in the establishment of a profit-making endeavor in the production and marketing of the machines.

... Of Income And Markets

Excerpts from The Conference Board's recent Minneapolis meeting on the "Consumer Market in Transition":

"Be concerned with *discretionary* income, with the amount of money people have available to buy what we have to sell. For example, a couple living in an apartment—maybe married, maybe not—with a joint income of $19,000 will have more discretionary money after paying for rent, food and transportation than another couple with an income of $25,000, two children and a mortgaged suburban house that must be kept in good repair. And if they have two cars, their income is reduced even more, and if one of the children is in college, you can be sure that that family is flat broke."

—Walter J. Neppl, Executive Vice President, J.C. Penney

"...We are moving rapidly from a middle-income to an upper-income market. The Conference Board estimates that in the Seventies the money which will become available for optional spending will substantially more than double.

"...While real income is expected to rise by about 50 percent over the next ten years, discretionary income will grow some five times as fast. We have here the promise of a boom prosperity for those industries catering to the needs and the whims of the affluent....The class market is—clearly and unmistakably—in the process of becoming a mass market."

—Fabian Linden, Director of Consumer Research for The Conference Board

"...The groups are *there* all right. One of the most obvious is the burgeoning singles market. Fourteen *million* of them at last count. Probably the biggest group of people with really similar lifestyles that will ever occur. But what's anybody doing about it? Who's tailoring their products to fit the market? Or even positioning them? The "singles" apartment complexes have done a decent job. But even there it's hard to determine which came first—the chicken or the egg. Fourteen *million*—and because they're not married, each couple tends to buy *two* of everything.

"...There are now 56.5 million young adults between the ages of 20 and 34. These people are staying single longer and are less and less inclined to mortgage future earnings in real estate and life insurance. They consume conspicuously. They'd rather have a Rolls Royce than a Dow Jones. Most of them know less about the capital market than they do about consumer credit, which they use heavily."

—James C. Arthur, President, Arthur & Wheeler

Tourism Is Subject Of U.S. Trade Mission To USSR

A special American trade mission, going to Russia Sept. 15-25 to discuss tourism between the two nations, will be led by C. Langhorne Washburn, Assistant Secretary of Commerce for Tourism.

U.S. participants are Paul Sheeline, chairman of the board, Intercontinental Hotels; Curt Strand, president, Hilton International; Peter Ueberroth, president, Ask Mr. Foster and Tour Consultants, Inc.; William Walton, vice chairman of the board, Holiday Inns of America.

Also Jerome W. Komes, president, Bechtel Corp.; J. Willard Marriott, Jr., president, Marriott Corp.; Robert McMullen, president, American Society of Travel Agents; and Harold B. Scott, president, US-USSR Trade and Economic Council, Inc.; James A. Henderson, executive vice president of American Express Co., and Dan Colussy, senior vice president of passenger marketing, Pan American World Airways.

Ten Firms Promise Energy Use Labels On Air Conditioners

Ten major manufacturers of room air conditioners have agreed to participate in the new voluntary energy conservation labeling program developed by the Commerce Department.

Airtemp Division of Chrysler Corporation, General Electric Company, York Division of Borg-Warner Corporation, Westinghouse Electric Corporation, and Admiral Corporation have formally agreed to provide energy efficiency labeling for the consumer on their room air conditioners.

In addition, Carrier Air Conditioning Company, Fedders Corporation, J.C. Penney Company, the Whirlpool Corporation, and Emerson Quiet-Kool Corporation have indicated their intention to participate in the program.

Together, the ten firms produce well over 600 models of room air conditioners.

The final specification for labeling room air conditioners, the first step in a broad voluntary energy conservation program for home appliances, was announced May 1 by Secretary of Commerce Frederick B. Dent. This magazine carried an article in the June 10 issue explaining the specification and its value to consumers.

The purpose of the labeling is to afford the consumer the opportunity to select the most efficient type of air conditioning unit for his needs. At the same time, it will enable the purchaser to realize a cost saving over the life of the unit by decreasing his total utility bill.

The label specification was developed by Commerce's National Bureau of Standards in consultation with the Council on Environmental Quality and the Environmental Protection Agency.

To assist consumers in choosing room air conditioners on the basis of cooling capacity and energy efficiency, the Department of Commerce has published a pamphlet titled "Energy Efficiency in Room Air Conditioners." Single copies are available at no charge by writing the Consumer Product Information Center, Pueblo, Colorado 81002.

Labor Dept. Lists Buying Information For Minority Firms

Minority contractors now have a fresh and useful free source of information as to potential buyers for their goods and services. "U.S. Department of Labor: What It Buys," just published by the U.S. Department of Labor, spells out what that agency buys, names persons to contact, and lists the names and addresses of related procurement offices and small business specialists.

"Labor Department awards to minority contractors rose more than 1.6 percent from fiscal year 1972 to 1973, despite a decrease in its total procurement," noted Alex Armendaris, director of the Department of Commerce's Office of Minority Business Enterprise (OMBE), which was created in 1969 to coordinate federal and private efforts in the development of minority businesses. "This is a result of the Department's special initiative in training its field staff in the national minority enterprise program."

Some 22 federal agencies are members of a Commerce Department-coordinated Interagency Council for Minority Business Enterprise designed to stimulate minority business development.

Specialists make difference

The U.S. Department of Labor attributes its progress in minority contracting largely to a newly-established position of a minority business adviser and to the development of active small business specialists in its national and regional offices.

"Agency activities vary from purchases of goods, such as safety test equipment, to services in training programs," Armendaris pointed out. "All such efforts help to bring minorities into America's economic mainstream."

Businessmen may obtain a free copy of "U.S. Department of Labor, What It Buys," by writing: Office of Grant and Procurement Policy, Room 109 Railway Labor Building, 400 First St., NW. Washington, D.C. 20215.

Minority Manufacturers Get Boost From OMBE

The National Association of Black Manufacturers will assist minority manufacturers find new channels of distribution through a $161,030 contract with Commerce's Office of Minority Business Enterprise.

Under the terms of the one-year contract, NABM will provide national trade association services to minority firms. These services include conducting market surveys, locating sources of financing, developing common accounting procedures, publishing trade and technical information, providing management and technical assistance, conducting education seminars, and maintaining liaison with government and industry for market development of minority firm products.

Funded by OMBE since 1972, NABM now has over 210 affiliate members across the country including the Delta Foundation (Alabama, Mississippi and Louisiana), the Lewis .H. Latimer Foundation (New England), the Los Angeles Black Businessmen's Association (Southern California), and the Latin American Manufacturers Association (California). NABM offers its members advice on cooperative advertising, investment possibilities and plant expansion.

OMBE funds 21 such minority business and trade associations nationwide to organize minority businessmen in the same trade and provide cooperative services that will improve the competitive positions of its members.

Calendar For Businessmen

Aug. 7-8 — Chicago — The First National Fund Raising Conference, Center for Continuing Education, University of Chicago. For information, Ms. Sandy Padrick, New York Management Center, Dept. 14-NR, 360 Lexington Ave., New York, N.Y. 10017.

Aug. 12-26 — Norman, Okla. — National Industrial Development Institute, Univ. of Oklahoma. Sponsor: American Industrial Development Council. For information, Gerald E. Ruffin, Director. (405-325-1931.)

Sept. 4-6 — San Francisco — Council for Urban Economic Development seminar, PSA Hotel. For information, Council for Urban Economic Development, 1620 Eye St. NW., Washington, D.C. 20006. (202-293-6911.)

Sept. 5 — New York City — Fourth Annual Eco-Technic Recycling Conference, Waldorf-Astoria Hotel. Sponsor: National Association of Recycling Industries, Inc. For information, National Association of Recycling Industries, Inc., 330 Madison Avenue, New York, N.Y. 10017.

Sept. 9-10 — New York City — First National Structural Foam Conference, Roosevelt Hotel. Sponsor: New York University. For information, Alex Makowski, New York Management Center, Dept. 14-NR, 360 Lexington Ave., New York, N.Y. 10017. (212-953-7272.)

Sept. 9-11 — Chicago — 3rd International Pollution Engineering Congress, McCormick Place. Held in conjunction with 3rd International Pollution Engineering Exposition. For information, Clapp & Poliak, Inc., 245 Park Ave., New York, N.Y. 10017. (212-661-8410.)

Sept. 23-26 — Washington — 10th Annual Marine Technology Society conference, Sheraton-Park Hotel. Sponsor: Marine Technology Society. Featured speaker: Dr. Robert M. White, Administrator, NOAA. For information, Marine Technology Society, 1730 M St. NW., Washington, D.C. 20036. (202-659-3251.)

Sept. 23-27 — Dallas — First session of 4-part AMA Management Course, Royal Coach Motor Hotel. For information, American Management Assn., 135 West 50th St., New York, N.Y. 10020.

UN Conference Studies Ocean Law, Resources

One hundred and fifty-one countries are now participating in the Third United Nations Conference on the Law of the Sea in Caracas, Venezuela.

The June 20-Aug. 29 meeting follows six years of preparatory work by a committee of the United Nations and is considering such matters as breadth of the territorial sea, unimpeded passage of international straits, access to resources of the continental margins and the deep seabeds, management of world fisheries, scientific research, marine pollution, and procedures for the settlement of oceanic disputes. (See *Commerce Today*, Feb. 4, Page 13.)

The first and second UN Law of the Sea conferences were held in 1958 and 1960, respectively, and were partially successful in codifying international law of the sea. However, the participants failed to agree on limits to the territorial sea, the extent of fisheries jurisdiction, or the limits of coastal states' rights to the resources of the continental shelf beyond the territorial sea. Since those conferences, new problems and new technology have made more imperative the creation of a regime of law to govern man's uses of the seas.

U.S. position

The principal points of the United States' position are:

- A maximum permissible breadth of 12 nautical miles for the territorial sea;
- Unimpeded transit through and over straits used for international navigation;
- Broad coastal state jurisdiction over living and non-living coastal resources beyond the territorial sea to protect the interests and needs of coastal nations, coupled with coastal state duties to respect the interests of other nations and the international community;
- Protection of the marine environment;
- An international regime and machinery for the resources of the deep seabed which provide for their exploration and exploitation as the common heritage of all mankind;
- Protection of the interests of all nations in access to and benefits from increased scientific knowledge of the oceans; and
- A system of peaceful and compulsory third-party settlement of disputes assuring a system of law and justice.

The chairman of the U.S. delegation is Ambassador John R. Stevenson, special representative of the President for the Law of the Sea Conference. The vice chairman and deputy special representative is Professor John Norton Moore, chairman of the National Security Council Interagency Task Force on the Law of the Sea.

Recent Technical Publications

These recent reports of government-conducted or sponsored research issued by the National Technical Information Service are of possible interest to U.S. businessmen. Prices listed are for paper copies; all are also available in microfiche for $1.45 each. Order from NTIS, P.O. Box 1553, Springfield, Va. 22151 (703-321-8543)

Electronic calculators (PB-227 015). Veterans Adm. Hospital, Sepulveda, Cal. 127pp. $10. Discusses operating principles of electronic calculators from the simplest to the largest systems and including programming methods for various classes of calculators.

Clean water: Report to Congress 1973 (PB-227 013). Environmental Protection Agency. 75 pp. $3.75. Covers water quality planning, surveillance and research; development of industrial effluent limitations; federal enforcement procedures; state and local water pollution control programs; efficiency of treatment plants; manpower programs; and the Water Pollution Control Advisory Board activities.

Manual for calculation of conventional water treatment costs (PB-226 791). Control Systems Research, Arlington, Va. 89pp. $3.75.

Waste heat utilization: A bibliography with abstracts (COM-74-10313). NTIS. 29pp. $20. Contains 25 abstracts on total energy systems, waste-heat boilers, use of waste heat for sewage treatment, and beneficial uses and effects of waste heat from electric plants.

Energy conversion (AD-771 750). Defense Documentation Center. 407pp. $8.25. Annotated bibliography covers fuel cells, mineral fuels, nuclear energy, solar energy, steam power, thermionic generators, geopolitical energy studies and others.

Ocean waste disposal in selected geographic areas (PB-224 793). Interstate Electronics, Anaheim, Cal. 394pp. $8.

Engineering for resolution of the energy-environment dilemma (PB-224 508). National Academy of Engineering, Washington, D.C. 348pp. Microfiche only. Gives detailed background information, policy considerations and recommendations for mitigating the conflict between demands of society for electric energy and its simultaneous desire to preserve the quality of the environment.

Reuse of solid waste from water-softening processes (PB-224 820). ITT Research Inst., Chicago. 119pp. $4.25. Tells how to dewater a water-softening sludge and its use as a mineral filler in paints, floor coverings, caulking compounds and bituminous products; mixing with sands, clays, and organic soils to improve their workability and strength; as an agricultural liming material; and as a filler in concrete.

Assessment of geothermal energy resources (PB-224 882). Federal Council for Science and Technology. 97pp. $3.75. Discusses this natural source of relatively clean energy, water and minerals that could be of significant impact if developed to full potential.

Trends in environmental law related to water resources planning (PB-224 824). 123pp. $4.25. Studies trends in four areas of environmental law: standing to sue; individual/agency interaction; constitutional rights and the environment; and common law doctrines.

Tankers (AD-772 300). Defense Documentation Center. 190pp. $5.50. Annotated bibliography covers structural design, cost effectiveness, oil-pollution control, cargo-vessel capability, maneuverability and harbor facilities.

Summary of national transportation statistics (PB-226 747). Transportation Systems Center, Cambridge, Mass. 111pp $4.25. Presents cost, inventory and performance data for passenger and cargo operations for: air carrier, general aviation, auto, bus, truck, local transit, rail, water and oil pipeline.

Energy statistics: a supplement to the summary of national transportation statistics (PB-225 331). Transportation Systems Center, Cambridge, Mass. 94pp. $3.75. Gives selected time-series data describing transportation, production, processing and consumption of energy. Includes statistics on revenues and expenses of oil pipeline companies, number and capacities of U.S. tank ships, total crude oil transported in the U.S. by method of transportation, growth over time of U.S. oil and natural gas reserves, refinery capacity, yields, gasoline and oil costs of autos of different sizes, petroleum consumption by type, energy intensiveness of air carriers, and electrical energy consumed by local transit industries.

INTERNATIONAL COMMERCE REPORT

U.S. Trade Share Improves In Many Nations, Despite Weakening In Key Markets

Imports by the leading U.S. trading partners continued to expand substantially during the latest 12-month period for which data are available, generally ending in April or May 1974. Virtually all nations shown in the accompanying table recorded substantially higher levels of purchases during the year.

Foreign demand for U.S. goods was likewise strong. Most nations stepped up their purchases from this country by more than 40 percent. As a result, U.S. exporters improved or held their position in about half the listed markets. Among the top ten, however, their share generally deteriorated.

The rapid rate of import growth reflected the widespread economic expansion experienced during most of the reporting period. Strong demand, confronted at times by inadequate production capacity, led to substantial price increases for a wide range of industrial and consumer products. At the same time, crop shortages in many parts of the world created upward pressures on prices of agricultural products as well.

Contributing further to the increased value of imports were the huge jumps in petroleum prices decreed by the oil producing nations beginning in the fall of 1973, the effects of which are beginning to become apparent in the trade data. Information from some of the larger industrial countries indicates that the value of their oil imports is climbing steeply, exceeding the rise in other purchases as a group.

To preserve continuity with previous reports in this series, the trade statistics used in this article are expressed in U.S. dollars by applying the exchange rates prevailing in each period to the national currency data for each country. Non-dollar reserve assets are treated in the same manner. As a result, changes based on dollar values are inflated (deflated), for countries whose currencies have appreciated (depreciated) relative to the dollar.

The world's top ten trading nations each increased their purchases of U.S. goods significantly, but in only two, Belgium and the Netherlands, did this country's share expand and only in Canada was it maintained. Nearly all of these prime markets, nevertheless, increased their purchases from the United States at a substantially faster pace than they had a year earlier.

Both Belgium and the Netherlands stepped up their intake of U.S. goods more rapidly than those from other sources. Belgium's purchases grew by half, spurred by higher arrivals of nonelectric machinery and soybeans. Greater imports of aircraft also contributed to the U.S. gain in the Netherlands, as did those of corn, soybeans, animal feedstuffs, wheat, and nonferrous ores and concentrates.

Crime Control Equipment Requires Export Licenses

Validated export licenses are now required for each shipment of any instruments and equipment particularly useful in crime control and detection to the following destinations: Albania, Bulgaria, Czechoslovakia, East Germany, Estonia, Hungary, Latvia, Lithuania, Outer Mongolia, the People's Republic of China, Poland, Romania, and the Soviet Union.

Commerce Secretary Dent, announcing the step, stated that the new licensing requirements are being imposed under the foreign policy provisions of the Export Administration Act. He emphasized the government's concern with potential uses to which such equipment could be put, as well as continuing interest in the welfare of persons who seek to exercise their fundamental rights. The new controls were instituted in consultation with the Department of State and other agencies and have the express concurrence of Secretary of State Kissinger.

In the Canadian market, imports from both the United States and other suppliers expanded by slightly more than one-fourth. The inflow of U.S. passenger cars and trucks as well as automotive engines and parts remained strong for most of the period and larger purchases of aircraft and live animals also contributed importantly to the rise.

Despite a jump of more than three-fourths in Japan's imports from this country, the U.S. share dipped as other suppliers did even better. Among the big sellers were American corn, wheat, rice, and organic chemicals. Entries of soybeans, wood and lumber, steel scrap, nonferrous metals, and aircraft were likewise buoyant.

In both Spain and Italy, increased imports of corn and soybeans helped raise by one-half the total received from this country. Spanish purchases of animal feedstuffs, nonelectric machinery, and ferrous scrap also advanced notably as did Italian imports of cheese, aircraft, and chemicals.

Share down in U.K., Germany, France

Imports of U.S. goods, particularly aircraft, by the United Kingdom, Germany, and France expanded by around 35 to 40 percent but those from competitors rose even faster. Greater inflows of U.S. electric machinery, chemicals, office machines, and corn also contributed significantly to the rise in British purchases while soybeans, corn, and electrical equipment did likewise in Germany. Meanwhile, France boosted its purchases of office machines, power generating machinery, soybeans, animal feedstuffs, and meat.

The U.S. share advanced strongly in some of the smaller developed countries. In Australia, imports from the United States, led by nonelectric machinery and chemicals, nearly doubled. Animal feedstuffs and wheat were key contributors to the increase in Yugoslavia; machinery, in Finland; and corn and wheat in Portugal. Conversely, in Denmark, Austria, and the Republic of South Africa, imports from competing suppliers rose more rapidly than from the United States.

Mexico, this country's most important market in the developing world, stepped up its imports of U.S. goods moderately faster than those from other sources. Purchases increased in a wide variety of products, particularly corn, automotive parts, iron

and steel scrap, and both nonelectric and electric machinery.

The U.S. position also improved in several of the Far Eastern nations. Both Taiwan and Korea sharply increased their imports of American wheat, corn, cotton, and iron and steel scrap. Taiwan recorded a higher inflow of soybeans; Korea, aircraft and barley. Rice, cotton, plastics, and diamonds contributed importantly to the unusually steep gain of around two-thirds in Hong Kong's purchases from the United States. On the other hand, despite a similar rise in Singapore's imports from this country, the U.S. share only held even.

In Brazil and Nigeria, the U.S. standing edged downward while in Iran it declined more substantially.

Reserves level off

As of March 31, 1974, official reserves of the leading trading countries listed in the table were valued at $146 billion, virtually equaling those of a year earlier. This contrasted with the uptrend reported for some time in these articles. The stabilization was attributable in part to the absence of any increase from a higher dollar valuation of non-dollar reserve assets which had resulted from the currency realignments of recent years. The leveling off in the reserve total, however, masked significant changes in individual countries as holdings by the developed countries fell by $5.8 billion and those of the developing areas increased by $5.3 billion. Sizable losses by Japan and France contributed most to the overall decline of the former group, while Brazil, Iran, and Nigeria headed the list of gaining countries in the latter group. In addition, large increments in reserves were posted by other oil producers, especially Saudi Arabia and Venezuela, not discussed in this report because of the lack of current trade data.

Japan recorded a massive drop in official holdings totaling $5.7 billion during the period under review due to a reduced trade surplus, a bigger deficit on invisibles, and increased long-term capital outflows. The largest declines occurred in the second and fourth quarters of 1973, while the first quarter of this year showed a slight rise.

France has experienced reserve losses since mid-1973, especially in the final three months of the year when repayments were made to other central banks for their earlier support of the franc. Further deterioration occurred in the opening months of this year as capital inflows only partly offset the deficit on current account, bringing the overall 12-month loss to $3.1 billion.

Some increases shown

Brazil and Spain each reported increases in excess of $1 billion in their reserves. For both, all or most of the improvement came in the second and third quarters of 1973. Capital inflows aided the two countries' positions, while Brazil, in addition, benefited from an improved trade balance and Spain from higher tourist earnings and workers' remittances. Iran and Nigeria also posted sizable increases in their holdings, reflecting the sharply higher world prices received for their petroleum.

In Germany, reserves fell in all quarters except for July-September 1973 when central bank support of weaker currencies resulted in a large gain. Throughout the period under review, however, the German trade account remained in strong surplus.

Both the United Kingdom and Italy increased their holdings by about $400 million. Although each registered trade deficits, which widened substantially during January-March 1974, increased official overseas borrowing provided an offset. Also, gains in reserves of about half a billion dollars each were recorded by Turkey, Yugoslavia, and the Philippines.

World Market Report

The 41 markets shown below accounted for 90 percent of 1973 imports into all free-world markets and 88 percent of imports from the United States.

Values in millions of dollars — Published quarterly

Importing country	1973 Imports			1974 Imports January through latest month				Import change in latest available 12-month period*		Reserves at end of first quarter	
	From world	From U.S.	U.S. share %	Latest month	From world	From U.S.	U.S. share %	From world %	From U.S. %	1973	1974
Germany, Fed. Rep.	54,844	4,588	8 4	May	27,654	2,233	8 1	+ 40	+ 37	32,324	32,874
United Kingdom	38,843	3,966	10 2	Apr.	16,873	1,626	9 6	+ 48	+ 40	6,036	6,444
Japan	38,201	9,243	24 2	Apr.	19,642	4,806	24 5	+ 81	+ 76	18,125	12,425
France	36,414	2,990	8 2	May	21,783	1,732	8 0	+ 44	+ 34	11,182	8,126
Italy	27,718	2,298	8 3	Mar.	9,262	678	7 3	+ 58	+ 51	6,244	6,667
Canada	24,817	16,943	68 3	May	13,275	8,943	67 4	+ 28	+ 28	6,152	6,102
Netherlands	24,742	2,122	8 6	Feb.	4,657	403	8 6	+ 42	+ 45	6,086	6,003
Belgium-Lux.	21,975	1,257	5 7	Jan.	2,024	134	6 6	+ 41	+ 51	4,866	4,779
Switzerland	11,677	737	6 3	May	5,929	385	6 5	+ 49	+ 23	7,876	7,588
Sweden	10,625	705	6 6	Mar.	3,070	209	6 8	+ 31	+ 26	2,116	2,287
Spain	9,594	1,545	16 1	Apr.	4,555	799	17 5	+ 55	+ 52	5,339	6,470
Denmark	7,711	515	6 7	Apr.	3,178	192	6 0	+ 54	+ 43	1,075	1,021
Australia	7,664	1,718	22 5	May	4,635	1,022	22 0	+ 71	+ 92	6,015	5,789
Austria	7,117	218	3 1	May	3,692	111	3 0	+ 41	+ 36	2,939	2,760
Brazil	6,955	1,895	27 6	. . .	. . .	. . .		+ 43	+ 41	4,959	[16]6,109
Norway	6,238	386	6 2	Mar.	1,928	134	6 9	+ 47	+ 68	1,389	1,788
Hong Kong	5,631	719	12 8	Apr.	2,212	290	13 1	+ 52	+ 65	(2)	(2)
South Africa	5,182	[2]832	[3]16 0	. . .	. . .	. . .		+ 29	+ 26	1,636	1,414
Singapore	5,065	765	15 1	Apr.	2,585	306	11 9	+ 67	+ 67	1,020	[11]1,310
Yugoslavia	4,511	261	5 8	Mar.	1,644	105	6 4	+ 49	+ 71	902	1,419
Korea, Rep.	4,240	1,202	28 3	Apr.	1,996	550	27 6	+ 73	+ 81	784	1,031
Finland	4,207	198	4 7	Apr.	2,028	116	5 7	+ 41	+ 69	664	682
Mexico	[3]4,036	[2]2,543	[3]63 0	. . .	. . .	. . .		+ 38	+ 43	1,282	[11]1,550
Taiwan	3,778	954	25 2	Mar.	1,365	365	26 8	+ 74	+ 107	1,229	1,108
Greece	3,428	283	8 2	Jan.	294	19	6 5	+ 44	+ 93	1,095	948
Iran	3,369	473	14 0	. . .	. . .	. . .		+ 40	+ 16	1,160	2,124
Portugal	3,008	246	8 2	Mar.	583	49	8 2	+ 54	+ 59	2,615	2,675
India	3,006	[3]518	[3]17 2	. . .	. . .	. . .		+ 34	+ 57	1,311	[4]1,177
Israel	2,987	565	18 9	Mar.	869	166	19 0	+ 54	+ 55	1,458	1,624
Ireland	2,789	192	6 9	. . .	. . .	. . .		+ 33	+ 20	1,017	1,046
Turkey	2,099	185	8 8	Apr.	1,044	116	11 2	+ 48	+ 18	1,729	2,256
Malaysia, West	2,087	171	8 2	. . .	. . .	. . .		+ 52	+ 40	[5]1,089	[5]1,480
Thailand	2,043	[3]283	[3]13 8	. . .	. . .	. . .		+ 38	+ 21	1,281	1,700
Nigeria	1,876	191	10 2	. . .	. . .	. . .		+ 25	+ 22	446	1,230
Philippines	1,767	501	28 4	Mar.	697	155	22 3	+ 57	+ 62	710	1,189
Morocco	1,101	118	10 7	. . .	. . .	. . .		+ 43	+ 103	272	244
Peru	1,026	306	29 9	. . .	. . .	. . .		+ 29	+ 28	449	[4]515
Pakistan	951	228	24 0	Apr.	466	107	22 9	+ 64	+ 69	353	430
Viet-Nam, Rep.	656	304	46 4	. . .	. . .	. . .		- 5	5	215	[4]190
Panama	489	172	35 2	. . .	. . .	. . .		+ 12	+ 13	933	[6]1,212
El Salvador	[3]355	[3]104	[3]29 2	. . .	. . .	. . .		+ 28	+ 36	103	87

Note: The countries shown above include the 41 major importers of U.S. merchandise in 1973 for which current data are available. In order to present comparable statistics for all countries, import data have been adjusted from an f.o.b. to a c.i.f. valuation for Australia, Canada, Philippines, and Republic of South Africa. Reserves include official holdings of gold and foreign exchange, the gold tranche position, and Special Drawing Rights in the International Monetary Fund.

*Compared with preceding 12-month period.

[1]End of February. [2]Not available. [3]Estimated from partial year data. [4]End of January. [5]Includes East Malaysia. [6]End of June 1973.

Source: Official trade statistics of listed countries, International Monetary Fund, *International Financial Statistics*.

Polish Enterprise Wants Technology, Machinery

POLIMEX-CEKOP, a major Polish foreign trade enterprise, seeks technology and machinery for a complete plant to manufacture heat exchangers for home heating systems connected to municipal central heating systems. Total value of the contract is estimated at $3-3.5 million, and Polimex advises that the contractor should be willing to accept product as partial payment. Technical specifications available from the U.S. Trade Development Center, American Embassy, Warsaw, c/o Dept. of State, Washington, D.C. 20520, or D. Piggot, TDAD/BEWT, Room 4816, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-3352.

MISSION IN MOROCCO—*Dr. Abdelhap Jouahri (right), Director of Avicennes Hospital, Rabat, shows facilities to U.S. mission. From left (front): Willard Hunter, Ritter Co.; Bernice Hinckley, Drake Willock; Jan Van Uum, Jewett Int'l; and a Ministry of Health official.*

U.S. Hospital Equipment Highly Rated In N. Africa

In a five-hour period at one North African site, more than 100 business and professional counterparts came to talk with members of a recent U.S. medical and hospital equipment trade mission. Several members developed such valuable contacts during their two-week stay in Rabat, Casablanca, Algiers, and Tunis that they are interested in joining similar missions to other parts of the three countries visited.

Morocco, Algeria, and Tunisia have not been traditional markets for U.S. medical and hospital equipment. Each has begun or soon will be initiating basic 1973-77 four- or five-year plans to further expand and develop medical facilities. Decisions on purchasing expensive equipment may come more slowly than in some other pursuits, but efficient follow-up and patience by suppliers should result in expanding U.S. sales, according to Mission Director Donald W. Fry of Commerce's Phoenix District Office. U.S. equipment is highly rated, and in most instances, competitive in price, the mission found.

All of the mission members plan to prepare and submit specific business proposals to the leading Ministry of Health officials in each country. Sixteen agents and distributors were appointed or expect to be within the next six months. Discussions covered possible visits to the United States of missions from each of the countries, to acquaint buyers with the many facets of the U.S. medical and hospital equipment industry. All except two of the participating firms were new to these markets.

The nine-member group was comprised of manufacturers of a broad range of equipment—from surgical instruments and lights, dental equipment, infant incubators, steam sterilizers, hemodialysis machines, and physiotherapy equipment to mobile hospitals, prefabricated hospitals, and complete turnkey hospitals.

Historically, each of these countries has been closely tied to European trading partners, primarily French, English, Dutch, and German companies that have provided the major share of medical and hospital equipment. A.D. Pearson of Gomco Surgical Manufacturing Corp., Buffalo, commenting on the situation, said: "In any type of hospital equipment supplied by American manufacturers, I don't think I saw more than five pieces in four stops and I think this is indicative that we are losing out in this particular market. However, I do feel that we can make inroads, and that's why I say that my firm's program specifically is over the next five years."

Service, repair

The mission observed that one of the most pressing problems facing North African medical facilities today is their need for regular service and repair of new and old medical equipment. In each country, the members were urged to furnish effective sales and service training for future buyers. George Garamy, Frigitronics of Conn., Shelton, Conn., emphasized that particularly for the use of specialized new equipment developed during the last five to ten years, considerable training and education must be provided. He advised

INTERVIEW IN TUNISIA—*Mission member David Tubbs discusses his firm's equipment with a Tunisian businessman (center); at left, Jamel Ben Miled, U.S. Embassy.*

that "one should carefully investigate the applicability and volume of the market if he handles special instruments, as the cost of education might prove to be unjustified by the limited volume."

Outlook by country

A by-country sketch of mission activities and market outlook is provided by Director Fry:

Morocco: Mission members met with Ministry of Health officials and visited the Avicennes Hospital in Rabat and the Averroes Hospital in Casablanca. The government, according to the five-year plan (1973-77), expects to build 1,000-bed hospitals in both cities, regional hospitals in each chief economic region which will add 2,000 beds, and provincial hospitals with an additional 2,300 beds. This construction program is budgeted for $76 million. Generally, Morocco is rated a most promising market for U.S. medical equipment on a long-term (three to five years) basis, as considerable introductory and development work is needed to fully acquaint professional users with U.S. equipment.

Algeria: The U.S. businessmen met with the Ministry of Health and the leading officials of the Pharmacie Centrale Algerienne in Algiers. They also visited Mustapha Hospital (Algiers General and University Hospital Center), where they conducted a seminar attended by members of the hospital staff, the Ministry of Health, and the PCA. As Algeria has recently approved a four-year plan (1974-77) for major expansion of medical facilities, this was an ideal time to acquaint the professionals with U.S. medical equipment. All sales are to be made through the PCA in Algiers and all quotations are to be submitted in French. An excellent potential exists for U.S. equipment on a long-term basis if superior after-sales service programs are established.

Tunisia: Mission members met with the Minister of Health and other leaders of the Ministry, and visited Habib Thameur and Charles Nicole hospitals. The government's 1973-77 development plan includes construction of university and children's hospitals as well as other medical clinics and offices. The outlook for sales looks promising once the proper channels are developed.

Other companies on the mission, and the representative of each, were: Air-Shields International, Hatboro, Pa., David A. Tubbs; American Sterilizer Co., Erie, Pa., Jean F. Poncelet; Chattanooga Pharmacal Co., Chattanooga, J.M. Walker; D.W.S., Inc., Portland, Oreg., Mrs. Bernice Hinckley; International Health Facilities, Inc., Philadelphia, Otto Kovats; Jewett Refrigerator Co., Buffalo, Jan C.H. van Uum; and Ritter Co., Rochester, N.Y., Willard B. Hunter.

More Sales of Communications Equipment in Mid-East Foreseen

Visiting several Middle East countries recently, a U.S. communications equipment and services trade mission developed several messages for quick transmittal to U.S. suppliers:

- For a firm that is willing to establish a permanent presence in the area, either through a local agent or a direct company representative, the markets of Saudi Arabia, Kuwait, Bahrain, and Qatar are well worth a substantial, sustained sales effort. Patience and time are keys.
- The commercial climate is right. These countries have indicated their pro-American feelings, both as to doing business with U.S. firms and as to their preference for the quality of U.S. products and technology.
- The four countries should be looked upon as one market. Saudi Arabia has the greatest potential, but with the other three, the whole could represent a substantial volume of business.

"These countries have a lot of money to spend," says Mission Director Clifford R. Lincoln, who heads the Commerce Department's Newark, N.J., office, "and we should be more aggressively pursuing business in this neglected area."

The ten firms represented in the group are suppliers of a broad spectrum of high-technology products and services ranging from communications satellite systems and spacecraft development to highly specialized instrumentation and mechanical devices. They manufacture transceivers, amplifiers, protective and paging systems, high-frequency transmitters and receivers, antennas, microwave equipment, computer-based telemetry recording systems, and telefilm recorders. Services include education and training, operations and maintenance, program management, and systems design.

Prospects bright

Six of the firms had had no previously established contact in any of the four countries. Only two of the ten currently have representation in the area. All 11 members felt that long-range prospects are enormous, particularly in Saudi Arabia. They estimate their sales in the next 12 months at some $3.5 million, with another $3 million the following year.

Agents are a must in doing business, according to Lincoln. This requirement was expressed in almost all of the meetings with the Government ministries. Response to the mission by both Government and business leaders was most enthusiastic, he reports. One of the prime needs is for reliable consultants to help with modernization, and to offer package deals that encompass installing, training, and maintenance of equipment. The Japanese have been and are very active in the area, particularly in Saudi Arabia; main competitors in the other three countries, in addition to the Japanese, are the British.

To Saudi Arabia, from world

Saudi Arabia is an open market: businessmen from all over the world are coming in daily, Lincoln noted. In telecommunications, the market is restricted, primarily, to the government. Therefore, the buyers are mainly the Ministries of Communications, Defense, Information, Interior, and Education. Opportunities are virtually unlimited, as the Saudis need "practically everything"—telephone, telegraph, telex, microwave, radio, and television equipment; earth satellite station, and telephone exchanges. These must be package deals, Lincoln points out, including planning and advisory services, equipment sales, installation, and service and parts which would involve on-site technical assistance for three to five years.

Riyadh's telephone density is one of the lowest in the Middle East. Projects mentioned during the mission's stay were for supply and installation of two automatic telephone exchanges, a complete automatic exchange with receiver network for the National Guard, radio equipment for the Directorate of Meteorology, teleprinters for telex, and wireless equipment for Jidda's seaport. "We're sure there are many more," Lincoln observed.

Public works in Kuwait

Kuwait's economy is booming. The Government is pursuing a broad program of major public works and industrial projects costing tens of millions of dollars. Oil income is expected to continue at high levels. The country is said to be the most sophisticated telecommunications center in the Northern Gulf area. There is a network of modern automatic telephone exchanges, an internal backbone microwave system with junction lines, an earth station operating to the Indian Ocean satellite. A second station, to cover the Atlantic region, is being built. Substantial telephone and telex expansion is planned over the next five years, the mission found.

Bahrain: sharp expansion

Bahrain has been rapidly developing its internal telephone system. A year ago, a new 8,000-line exchange, part of a much larger expansion plan, was brought into service. International traffic also has increased sharply. Upon leaving Bahrain, mission member Ralph J. Powell of E Systems (Tai, Inc.), said: "Stronger emphasis is needed toward recognizing U.S.

business opportunities and toward penetrating traditional British entrenched services and industries.

Qatar seen 'buying American'

In Qatar, all foreign bids to government agencies are through local agents only. Reliance on British advisors is heavy, but American products will be considered because of technological advances and quality, Lincoln points out. He adds that a satellite earth station has been "put out to international tender," and Cable & Wireless, Ltd., has been appointed consultant. The internal telecommunications system also is being expanded. Leaving Qatar, mission member Del Aquila of Intech, Inc., Santa Clara, Calif., commented: "Product exposure and finding sales agents were made possible 'quickly and painlessly' via a good mission schedule."

Other participants were: Roche J. Deterville, Teledyne Camera Systems, Arcadia, Calif.; Raymond D. Egan, Granger Associates, Menlo Park, Calif.; Paul C. Hans, Fairchild Industries, Germantown, Md.; John D. Holmgren, GTE Sylvania, Mountain View, Calif.; Frank J. Jameson, Bell & Howell Communications, Waltham, Mass.; Richard J. Kessler, Scientific Radio Systems, Rochester, N.Y.; Richard Stanco, Singer Products, New York; and John Van, Microwave Associates Int'l, Burlington, Mass.

Textile Industry Expansion Noted By Latin Mission

The U.S. share of the market for textile machinery in Venezuela, Colombia, and Brazil—now at historically low levels—can be substantially improved, according to a trade mission that recently went to the three countries.

The U.S. suppliers found, in Venezuela, a "textile boom;" in Colombia, an effort to expand their already highly advanced industry; in Brazil, a desire to develop a world textile market for their products, Mission Director Michael A. Donohue of the Commerce Department reports.

The group agreed that Brazil has the largest potential, but is not an easy market in which to sell. "The Spanish, British, Japanese, Germans—all have been here with trade and exhibition missions, and they are successful; why aren't we?" Jose F. Flores of Coltron Industries, Charlotte, N.C., wonders.

Joseph Motta of Schmidt Manufacturing Co., New Bedford, Mass., feels that Americans are not aware of the potential. "How we can ignore an area like Pernambuco, Brazil, with its special tax advantages for new industries and practically complete elimination of duty on machinery for such new industries is beyond my belief . . . The Germans and Japanese who have been selling the bulk of the textile machinery must be extremely happy by our underestimation of the market."

The U.S. suppliers' offerings included humidification, air-conditioning and suction-cleaning systems; automated opening, blending, and card-feeding systems; doublers, folders, sewing machines, precision winders; dyeing and finishing plants; dryers, cleaners; frames, looms; and consulting services. The participants visited Caracas, Venezuela; Medellin, Colombia; and Sao Paulo and Recife in Brazil. The members toured textile plants in both Medellin and Recife. In Recife, they learned of a large textile expansion project in the Northeast—a government plan calling for more than $1 million worth of textile equipment.

With income from oil exports increasing in Venezuela, rapid industrialization in Brazil, and income from coffee and other exports increasing in Colombia, import growth is continuing in all three countries.

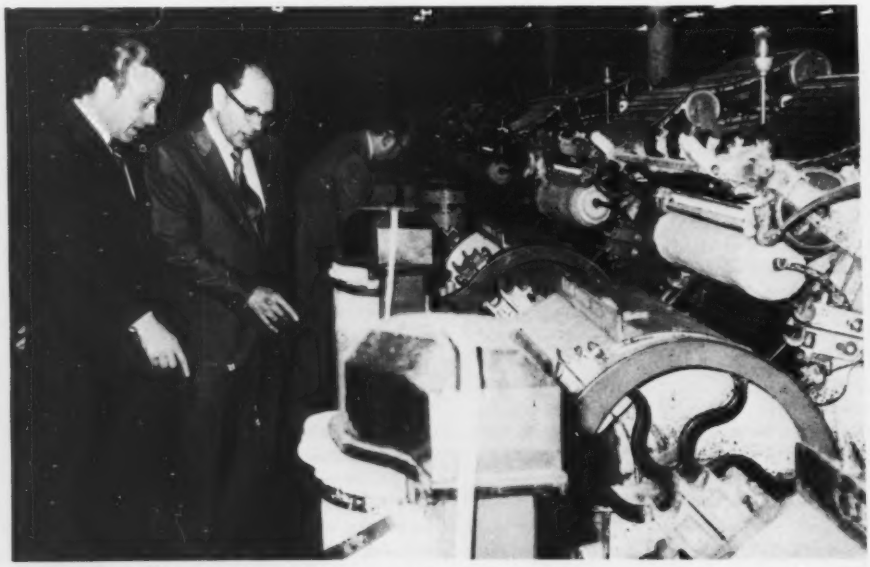
In addition to the strong foreign competition mentioned earlier, the mission cited other limiting factors:

In Venezuela, new legislation allows importation of used machinery, thus cutting into sales of new units. Also, buyers are looking for equipment now, and several of the U.S. businessmen had to turn down orders because of the far-ahead delivery dates they had to offer.

In Brazil, if a Brazilian company can manufacture a machine with technical characteristics, price and delivery time competitive with a foreign machine, high duties limit the importability of the foreign machine. Some U.S. companies feel that a joint venture with Brazilian interests for local manufacture is the best answer to entering this growing market. Many textile machinery products are not made locally, however, and must be imported.

Despite the impediments, the participants estimate their orders within the next year at more than $11 million. Direct sales totaled $139,000. Several agents were appointed. Almost all of the members plan to return within the year to pursue leads developed during their visit. Of his Venezuela experience, Jose Flores, Coltron Industries, Charlotte, N.C., said, "I am most happy with the way things are turning out." After Colombia, Carlos Orozco, Pellerin-Milnor, Kenner, La., said, "I interviewed everyone I wanted to see with marvelous results." And Carroll C. Parker, Curtis & Marble, Worcester, Mass., said, "Brazil has a far greater potential for textile machinery than all the rest of Latin America put together."

In addition to those already mentioned, the following businessmen participated in the mission: Ira T. Bostic, Leesona Corp., Charlotte, N.C.; Alfred Cadet, Proctor & Schwartz, Philadelphia; James Calvo, Rockwell International, Hopedale, Mass.; Alexander Crouch, Piedmont Engineers, Architects & Planners, Greenville, S.C.; Joe S. Fulmer, Marshall & Williams, Greenville, S.C.; Gordon A. Gatlin, Bahnson International, Winston-Salem, N.C.; Manfred Kramer, Saco-Lowell, Greenville, S.C.; Kenneth G. Lytton and Edward J. Barnes, Fiber Controls Corp., Gastonia, N.C. and Daniel Guy Rowe III, Carolina Machinery, Charlotte, N.C.



INDUSTRIAL TOUR—*Several members of the textile machinery trade mission scrutinize the operations of a mill in Medellin, Colombia. From left: Manfred Kramer, Alfred Cadet, Daniel Rowe.*

Trade Fairs, Centers

Brisk Activity At Osaka Fair Points To Expanded U.S. Sales

Keen interest in the consumer goods displayed recently at the Osaka International Trade Fair prompted the 38 U.S. exhibitors to forecast their resulting sales in the next year at more than $23 million—$4.7 million for the companies that were new to the Japanese market. Almost $80,000 worth of floor sales were booked during the exhibition, and more than 5,000 sales leads developed. The United States was one of 44 participating nations; the fair was open to the public, and around 1.4 million people attended.

Considerable attention was given to U.S. displays of appliances, housewares, sporting equipment, and high-quality novelty items, such as telecommunication telephones. Less attention was paid to jewelry, glassware and novelty appliances, such as ice cream makers, although the latter may be attributed to lack of knowledge on the use and purpose of such items. A strong market does exist for jewelry and glassware, however, as long as it is quality merchandise.

Buyers' interest broad

Extreme interest on the part of department stores and other retail store buyers was expressed for several consumer goods categories not shown at the fair. According to these executives, strong demand exists for the following products in Japan: furniture; home decorator items, such as early American products, carpets, draperies and decorating accessories; high quality, coordinated cookware; "do-it-yourself" equipment and models; pre-fab housing; backpacking and climbing equipment; children's apparel and toys; musical instruments, such as electric guitars and amplifiers; and pet accessories.

Later, these same executives cited several points on how U.S. exporters could better serve the Japanese market:

- **Brand names.** Many U.S. brand names are well known in Japan, and enjoy brisk sales. However, many quality U.S. brand names are not yet known in Japan. Forceful advertisement and promotion of these brands will impel strong incremental sales.
- **Service.** Establishment of installation and service facilities will be critical, particularly for built-in appliances and complete kitchens and appliance systems.
- **Higher fashion.** U.S. suppliers have a reputation for quality leisure wear. Trade sources see growing opportunities in upgraded fashion—an opportunity for U.S. suppliers to compete in an import area until now dominated by European suppliers.
- **Newest styles, designs and models.** In the past, what sold well in the United States two years ago would sell well in Japan today. The Japanese market is now demanding the very latest offerings in a wide range.
- **Channels of distribution.** U.S. firms should not get bogged down with the larger multi-line trading firms. Specialized trading firms and importer/distributors can be more effective for consumer goods. On this later issue, prospective U.S. exporters should keep in mind that an individual company's approach to the distribution system in Japan is dependent on the type of product(s) which it intends to export; on the type of market it wants to reach; on a given company's commitment to the market; and, to some extent on the size of the company, itself.

Micrographic Congress, Brazil, Invites Displays

U.S. suppliers of microfilm equipment will have an opportunity to expand their sales in Brazil by participating in the 6th International Micrographic Congress to be held in Anhembi Park in Sao Paulo Oct. 7-10. More than 100 international firms will be exhibiting their latesh microfilm equipment during IMC 74.

The United States exported $0.8 million worth of microfilm equipment to Brazil in 1973, and held a 60 percent share of certain imported microfilming related equipment imported into Brazil in 1972—indicating good acceptance of U.S. made equipment. Import duties range from 9 percent to 37 percent.

For details on participation in IMC 74, write to the Executive Secretary, International Micrographic Congress, P.O. Box 484, Del Mar, Ca. 82014.

Industrial Instruments Exhibit In Paris Nets Good Sales Response

The Industrial Process Controls and Measuring Instrumentation Exhibit held this year at the Paris U.S. Trade Center brought splendid results for the 32 exhibitors participating. Sales of $4.5 million during the year following the show was forecast by the participants, of which $2.3 million was attributed to firms new to export or to the French market.

Manufacturers of meters and controls and solid state power conversion equipment found strong demand for their products. Show results bore out earlier market predictions that the French will increasingly utilize electronic measurement for temperature control as contrasted with the older traditional mechanical systems. Interest in gas chromotography and other analysis equipment was good. In spite of some high prices compared to French and European competition, American products continue to have good potential because of their high quality and advanced engineering.

AT U.S. TRADE CENTER, PARIS—*During Industrial Process Controls and Measuring Instrumentation exhibit, Jean Vaumoron, sales manager of Varian Vacuum activities for France and Benelux, shows ionization gauge to a prospective customer.*

U.S. Geophysical Equipment Has Edge, Frankfurt Center Exhibit Indicates

From a marketing view, participants and visitors at the Geophysical Equipment Exhibition earlier this year in the U.S. Trade Center, Frankfurt, commented that the energy crunch could only be beneficial, especially in research and development operations and natural resources exploration. Thus, sales of geophysical equipment should gradually increase.

The technical and competitive position of U.S. products appears strong. Most exhibitors felt that their equipment had a distinct edge over that of most European competitors in design, versatility, technical excellence, and durability. Price, parts and service are always important factors in achieving success in the German market. The positive effects of recent currency realignments were felt to be largely offset by inflationary factors such as higher material, freight and overhead costs. Sales emphasis will continue to be generally based on quality, stressing technical excellence, performance, and dependability.

Largest single user

The German Government was cited as the largest single end user of the products shown, followed closely by the petrochemical industry and universities/research institutes. In declining order of importance, geodetic, civil/consulting engineers, geophysical, space and aviation, chemical, military, power, and biomedical users followed.

Among products offering the best short-run sales potential are seismic instruments, strata-timers, induced polarization instruments, magneto-telluric instruments, magnetometers, gamma ray spectrometers, digital blaster systems, structural dynamics equipment, digital phase coded syncronizers, seismic energy sources, satellite navigation systems, isodensity color image analyzer systems, automatic environmetal channel readout instruments, graphic recorders, sweep velocity recorders, minicomputers, surface density gages, depth gages, seismic correlators, recording films, paper and processors.

The most significant short-range future developments in geophysical equipment are expected in the area of miniaturization. New designs under way will reduce prices, yet improve accuracy and reliability. Packaging design improvements will probably be the next most significant change. New semiconductor devices (CMOSCCD), should reduce power requirements while meeting the new dimensional requirements of miniaturization.

In the longer range, but still not too distant future, new seismic techniques leading to the direct detection of natural resources—such as hydrocarbons, minerals,—will be developed. Other areas of research are satellite telemetry of seismic data from field acquisition to computer centers; digital time delay and recording; X - Y models of the stratatimers.

All of these developments are in a "breadboard" state and should be marketable over the next three years.

Exhibitors in the show view the German market optimistically and report 12-month sales estimates of $2.6 million resulting from their participation. Firms new to export or to the market account for $1,378,000 fo the projection. Twelve agency agreements were signed by the conclusion of the exhibition and eight more were under negotiation.

Demand For Instruments In Argentina Confirmed

Ten U.S. companies exhibiting process control instruments at the U.S. Trade Center in Buenos Aires last May confirmed good sales prospects for their equipment to the chemical, petrochemical, petroleum, natural gas, pulp and paper, and steel industries.

As domestic production of process control instruments is limited, imports account for two-thirds ($10 million) of replacement equipment purchased in 1973. The tire, automobile, aluminum, cement, textile and food industries are particularly in need of replacements at this time.

Sales during the exhibition amounted to $470,000. As a result of the 1,100 trade leads developed by the exhibiting companies, projected sales for the next 12 months are estimated at $3,480,000, of which approximately $1.4 million is for companies new to export. Valves, actuators, fittings, cylinders, positioners, temperature and flow controls, all sold well, as did digital control instruments; however, interest in pollution control analyzers and related instruments was rather limited.

U.S. Exhibition Results In Brief

The following summary reports have been received on U.S. overseas commercial exhibitions. Further details and marketing data derived from these exhibitions will be published as available.

Telecommunications Equipment Exhibition. Mexico Trade Center, June 24-28. Exhibitors, 48. Floor sales, $353,000; 12-month projection, $19.4 million, of which $5 million was by the 25 new-to-market firms.

Metal Surface Finishing and Treatment Equipment and Accessories Exhibition. Tokyo Trade Center, May 20-25. Exhibitors, 19. Floor sales, $39,500; 12-month projection, $4.4 million, of which $1.9 million is estimated by new-to-market firms. Nineteen leads for agreements. Business visitors, 1,642.

Pulp and Paper Equipment Show. Stockholm Trade Center, May 13-17. Exhibitors, 33. Floor sales, $1.55 million, of which $637,000 was attributable to the 12 new-to-market firms; 12-month projection, $8.34 million, of which $1.77 million new-to-market. Representatives appointed, 8; 10 additional under negotiation.

PROCESS CONTROL INSTRUMENTS—*At U.S. Trade Center Exhibition in Buenos Aires, visitors closely observed the products on display.*

Worldwide Business Outlook

Don't Overlook Bahrain, U.S. Ambassador Urges

Getting there first, in economic development as well as cavalry tactics, can sometimes make up for not getting there with the most. In the relative development of the Arab oil states, Bahrain's past and present successes, and cheerful future prospects, have been characterized by being first off the mark. Although its oil production, always small by regional standards, has leveled off in recent years, Bahrain has already established and is expanding the industrial and service structure which make it of special interest to American business.

This article by Joseph W. Twinam, U.S. Ambassador to Bahrain, continues the *Commerce Today* series on expanding business opportunities in the nations of the Near East. An overview report and articles by the top-ranking U.S. envoys in Saudi Arabia, Kuwait, Lebanon, Iraq and Oman appeared in the June 24 issue, and a report from Iran appeared in the July 8 edition.

As the strategically located island country of the Gulf, continues Twinam, Bahrain traditionally has been a center of regional commerce. A long, rich history, marked until the end of the 18th century by the occasional trauma of invasion from outside, has produced a resourceful, energetic people able to live by their wits, and with the wit to welcome and benefit from healthy influences from other cultures. The first Arab state in the Gulf to produce oil (a Caltex subsidiary, Bahrain Petroleum Company, brought in the first well over 40 years ago), Bahrain got a head start, and has kept its lead, in the social, technical, and educational progress which is the post-oil history of the Gulf states. The most populous by far of the nine Lower Gulf shaikhdoms, Bahrain became after World War II the center from which the British administered historic treaty relations in the Gulf. The U.S. Navy's Middle East force, which shows the flag in the Gulf and Indian Ocean area as manifestation of American interest and friendship, has been stationed in Bahrain for a quarter century.

When full independence came in August 1971, Bahrain's economic base was well established, and its growth strategy set, building on these assets:

Human resources — Bahrain boasts the best educated population in the Gulf and English is used widely and well as the second language. With the largest total population (estimated this year at slightly under a quarter million) and the lowest percentage of foreign population among the Lower Gulf states, Bahrain is well on its way toward coping with the acute manpower problems characteristic of the Arab oil-producing economies. Its well established Gulf Technical College is a regional leader in producing qualified administrative and technical personnel. Its government and business leaders display the intelligence, wisdom, and shrewdness worthy of any "Yankee trader".

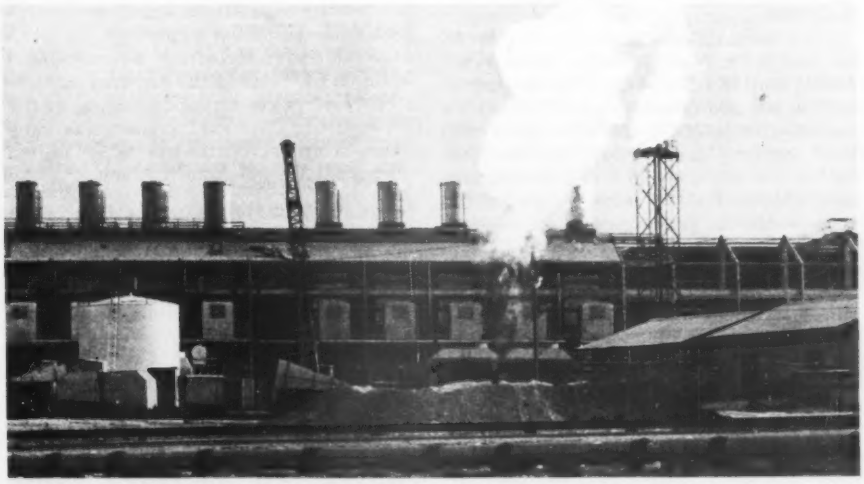
Political climate — The Government of Bahrain has been highly successful in its policy of maintaining friendly foreign relations, notably with its Gulf and Middle East/South Asian neighbors as well as with the United States, the United Kingdom and other Western industrial countries. Last year's adoption of a constitution formalizing rule of law, protection of individual liberties and concern for social values, and the establishment of an elective National Assembly, marked Bahrain's determination to continue on the road of orderly progress.

Natural resources — While crude oil production, the initial base of Bahrain's modern economy, may not grow significantly in the future, Bahrain has discovered non-oil-associated natural gas deposits comparable to the fabled Dutch gas fields. Their exploitation as a source of industrial power has just begun. The government is determining the scope of the fish resources around the islands of Bahrain. While Bahrain's modern shrimping industry has been notably successful, the present exploitation of other fish products in the area clearly lags far behind the potential of the Gulf waters.

Industry — Bahrain Petroleum Company's 250,000 barrel per day refinery, largest on the Arab side of the Gulf, has long been the centerpiece of Bahrain's industrial development. Now it is rivaled by the Aluminium Company Bahrain's (ALBA) 120,000-ton per year smelter, the first project to utilize Bahrain's vast natural gas supply. ALBA is a model of a cooperative investment venture between the Government of Bahrain and an international consortium of aluminum users, including substantial American participation by Kaiser Industries. Aluminium powder manufacture by Bahrain Atomisers is but the first example of the promising prospects for expansion of the aluminum industry in Bahrain. Work will soon get under way on the $118 million Bahrain dry dock sponsored by the Organization of Arab Petroleum Exporting Countries, a project offering significant opportunities for American contractors and suppliers, and interesting prospects in fields associated with ship repair. To meet future industrial demand the government has commenced construction of a natural gas fueled complex which will on completion of the final stage provide 90 m.w. of electricity and five million gallons per day of desalinized water. Establishment of industrial parks and favorable land use, import and tax advantages further underscore Bahrain's determination to attract foreign industrial investment.

Commerce — The leading entrepot of the Gulf, Bahrain efficiently employs its modern six-berth pier facility to accommodate increasing international and regional trade. In the last two years the value of Bahrain's imports has grown from $269 million to $328 million yearly. The traditional U.S. share of Bahrain's imports has been in the range of 12-13 percent; however, preliminary statistics for the first five months of 1974 show the United States as Bahrain's leading supplier, with over 25 percent of the market.

Services — With the best communications in the Gulf, based on a satellite earth station, Bahrain is the



ALBA ALUMINUM PLANT — *Kaiser Industries is one of several international firms that have joined with the Bahrain Govt. to develop this 120,000-ton per year smelter.*

natural headquarters site for American firms doing business in the Gulf. A financial community featuring 13 banks, including First National City Bank and Chase Manhattan Bank, facilitates the economic cooperation among Bahrain, its neighbors and the Western world.

Transport and tourism — With the most modern airport in the Middle East, Bahrain is well prepared to handle the largest aircraft and an awesome increase in international air traffic. The number of air passengers transiting Bahrain grew from 135,012 to 491,883 from 1971 to 1973. A Bahrain National Tourism Company has been formed with the government as one of the shareholders. Bahrain-based Gulf Aviation is rapidly expanding its regional and international services and upgrading its equipment and maintenance capability. From the pleasant roof-top bars of Bahrain's comfortable and modern existing hotels, you can watch construction of the Bahrain Hilton, scheduled for completion next year.

All this has been accomplished by a country uncertain where its next additional oil dollar was coming from. Until the recent spectacular rise in oil tax revenues, Bahrain was facing the prospect of an income from oil and refining services of roughly $85 million per year, barely enough to cover the expanding demand for social and other government services. Investment capital for Bahrain's future expansion would have to come largely from abroad. Nevertheless, because of the assets just mentioned, Bahrain has been doing well at remaining the commercial and service center of the Gulf on a relative shoestring of oil revenue.

Then the price of crude oil multiplied. Bahrain is rapidly moving from genteel fiscal subsistence to oil affluence. In relation to population Bahrain's oil income this year will be comparable to the riches that made Kuwait legendary a decade ago. And this in a country well down the road toward an industrial, commercial, and service economy not heavily dependent on oil income.

Admittedly, Bahrain's future oil income will be less by far than that of most of its neighbors. But that misses the point. If you want to sell, manufacture, or service in an oil producing state the question is not how much money the economy has, but how much it can spend at home. Unlike most of its neighbors, Bahrain does not anticipate large surplus income for investment abroad. But its relative capacity for absorbing goods, services, and investment — as well as technical and mangerial skill — from the United States is much larger than relative oil revenue would suggest.

Specific projects or areas to which American business interests should pay special attention are:

Dry dock — OPEC dry dock project, approximate cost $120 million. Dredging tender for $17.7 million was awarded to Costain-Blankevoort. Although initially planned for 350,000 tons capacity, expansion to accept ships of 500,000 to 1,000,000 tons was recently announced. Various contracts, i.e., structural work, mechanical works, infrastructural requirements will be put out for tender next September.

Expansion of Port of Mina Sulman — Under study; approximate cost $23 million. Extension will include berths, installations, cargo packing and handling, containerization and other systems, port approaches, dredging and reclamation.

Expansion of industrial area — The actual industrial area (free trade and transit zone) covers an area of 5 million sq. ft. of reclaimed shallow waters. A new area will add 2 million sq. ft.

American businessmen will find in Bahrain economic leaders disciplined in making the tough investment decisions needed to maximize relatively limited capital. They will find an economy and society on the move, in the center of an area of mind-boggling growth. They will find serious and adept economic planning yet opportunities for the imaginative but sound American, be he consultant, manufacturer, contractor, or exporter, to help open new and mutually rewarding horizons of economic cooperations.

American business cannot ignore the rather breathtaking possibilities in the oil-rich Gulf area. And no American businessman should consider the Gulf region without taking a hard look at Bahrain's potential.

So come to Bahrain, urges Twinam. You might find a most lucrative market, for knowledge, goods, investment, or services, in Bahrain itself. Odds are you will find the logical headquarters site for helping meet the development needs and for tapping the foreign investment potential of the Gulf region. And certainly you will enjoy the social amenities of this hospitable "Garden of the Gulf".

Ethiopian Business Less Active, But Opportunities Are Substantial

Over the past few months Ethiopia has been experiencing a business slump. Walter E. Stadtler, Commercial Attache at the U.S. Embassy in Addis Ababa, sees this as the direct result of both recent political instability and uncertainty over future government spending. Nevertheless, Stadtler adds, opportunities for long-term investment and increased trade remain substantial.

Commercial activity has declined sharply and will probably not return to normal for the remainder of the year. Assuming the political situation continues to stabilize, prospects over the longer term, however, appear to be excellent.

In 1973, as a result of strong world prices for Ethiopia's major export commodities, the economy registered a sizable increase in gross domestic product. However, the trend of worldwide inflation overwhelmed Ethiopia, particularly the four-fold increase in crude oil prices at the beginning of the new year. The oil crisis was the precipitating factor to the labor unrest which led to the fall of the old cabinet.

Period of uncertainty

The economy is at present undergoing a period of uncertainty. The dominant features of the current economic situation include an anticipated decline in overall agricultural output, in large part due to drought in seven of Ethiopia's 14 provinces; continued political uncertainty; and the resulting lack of major incentives for private domestic and foreign investment. Feeding the three million drought-affected inhabitants located largely in inaccessible areas remains one of the country's major problems.

The government appears to be looking at the economic situation realistically, however, and has taken remedial action to control the budgetary impact of recent developments. Deferrable expenditures, including uncommitted government-financed projects, have been delayed or completely withdrawn, but at this stage it is not entirely clear which projects have been affected or to what extent.

According to local business and banking officials, the rate of commercial activity has slowed down considerably since the March disturbances. This has been attributed to various causes, including uncertainty about the country's political future, which has clearly acted as a brake on prospective foreign investment, and a lack of enthusiasm and entrepreneurship among local merchants, who seem reluctant to reinvest their earnings. Several leading wholesalers have complained that their customers in the retail trade have been slow in making payment because of shrunken consumer demand. Whatever the cause or causes, local business sources note a slowdown in the sale of consumer goods.

Nevertheless, Ethiopia's current economic slowdown does not necessarily lessen opportunities for either long-term investment or increased trade for U.S. suppliers. Most observers agree that the reestablishment of political stability within Ethiopia will result in a less uncertain and thereby more attractive business and investment climate.

In a White Paper published April 9, the government made brief mention of its intention to encourage participation by foreign investors in the country's development efforts, but did not outline

any concrete incentives. Under the impetus of hopefully expanded development programs on the part of the new government, opportunities for U.S. exports to Ethiopia in a number of fields should be enhanced. American businessmen would do well to look at Ethiopia not merely in terms of today's limited market but in light of its longer-term potential.

Prior to the recent political instability and subsequent economic slowdown, local businessmen were showing increasingly greater interest in American products, particularly wearing apparel, toiletries, chemicals and office equipment, because Ethiopia's traditional Far Eastern and European suppliers increased their prices by as much as 75 percent since the energy crisis and were becoming unusually unresponsive in filling orders and answering inquiries. As a result, ever price conscious dealers began looking for alternate suppliers.

Other export opportunities may also be created in development of the tourist sector. One project that is moving ahead is construction of four hotels under Hilton management along Ethiopia's "Historic Route". Tenders for construction are expected to be let shortly. For further information write to Ato Abdul Jalil Mohammed, General Manager, Ethiopian Tourism and Hotels Investment Corporation S.C., P.O. Box 1263, Addis Ababa.

Yet another opportunity

Yet another opportunity lies in the supply of trucks to the local market, long dominated by Italian manufacturers. Current backlog amounts to about 400 vehicles, with a delivery period of 12 to 18 months. Tractors are another item in critical short supply.

U.S. firms should also be in good position to develop sales through response to Ethiopian Government tenders. Such items as communications and electrical equipment, educational aids, construction machinery and pipe for committed projects are and will continue to be imported by the various government entities for their own use.

At present, communications equipment probably represents the most significant market for U.S. exporters. Ethiopia's $54 million (1974-78) Telecommunications Development Project has just started and the call for tender for construction of Ethiopia's $4-6 million earth satellite station, although delayed, should probably go out before the end of the year. Interested U.S. suppliers who wish to place their names on the Ethiopian telecommunications authority's mailing list should write to Ato Betru Admassie, General Manager, Imperial Board of Telecommunications of Ethiopia, P.O. Box 1047, Addis Ababa.

Potential bidders should bear in mind that favorable credit terms are a key element in winning supply contracts.

Commerce Team Acclaims Prospects In Brazilian Market

U.S. exporters of chemical and petrochemical, iron and steel, electrical and electronic equipment, agro-industry and food industry equipment have excellent new sales and profit opportunities in Brazil, according to reports developed by a Commerce survey team recently back from Brazil.

- **Chemicals/Petrochemicals:** Brazil produced $3.5 billion of chemicals & pharmaceuticals in 1973, with petrochemicals, fertilizers and industrial gases pacing the overall growth. Last year, the Brazilian Government approved $320 million in new investment in the chemical and petrochemical industries, involving imported machinery and equipment worth $89 million. New investment is expected to increase rapidly during 1974-1977. By 1978 the market for chemical and petrochemical equipment should exceed $200 million a year, with imports accounting for 40 percent of the market.
- **Iron & Steel:** Brazil, a leading exporter of iron ore, plans to build up its steel-making capacity from 7 to 26 million tons a year by 1980. Large ultra-modern steel mills located near ports and geared to exporting as well as for the rapidly expanding domestic market will be built, equipped with large capacity blast-furnaces including BOF units, continuous casting and fully automated control systems. The government's National Steel Plan for 1974-1980 calls for accelerated expansion of the government's steel operations—CSN, USIMINAS and COSIPA; forming new steel companies; reorganizing the industry's financial and management structure; and promoting foreign investment in the steel sector. These plans will require substantial equipment imports.
- **Electrical & Electronic Industries:** Production of the electrical and electronic industries jumped 30 percent to $12.5 billion in 1973, one of the fastest rates of growth in Brazil's overall manufacturing sector. TV receivers (+35 percent), electric motors (+30 percent), toasters, fans, grills and room airconditioners paced this growth. The government approved new investments worth $200 million in 1973, up 57 percent from 1972, and of this total $61 million is earmarked for imported equipment.
- **Agro-industries:** Brazil has a tremendous potential in agriculture and food production and the new administration is giving top priority to exploiting this asset. The market for crop and livestock production machinery and equipment is estimated at $438 million and growing a whopping 38 percent a year. The major "raw" commodity processing companies also plan to invest more than $250 million through 1976, of which $142 million will likely be in imported machinery and equipment. The biggest purchases will be in the sugar, citrus, meat, poultry, grain and feed processing industries.
- **Food Industries:** While the overall food industry is growing about 8 percent a year, the demand for many types of prepared foods and for traditional food items in convenient packaging is growing much more rapidly. The market for food processing and packaging equipment is estimated at $74 million and growing 22 percent a year, with imports accounting for approximately 37 percent of the market.

The Department of Commerce can mail inquirers these individual reports, which are part of a comprehensive survey to be published soon, entitled: *Brazil: Survey of U.S. Export Opportunities.* To order, write: Ted Johnson, Latin America Division, BIC, Room 4039, U.S. Department of Commerce, Washington, D.C. 20230, and indicate the specific industry report desired.

Barbados Has Plans For Broad Expansion

Barbados is implementing an economic development plan for 1973-77 that calls for capital project expenditures of $87.8 million and offers a wide range of opportunities for U.S. exporters. The plan's main objectives are to expand the agricultural sector, promote extensive food production, modernize the sugar industry, expand manufacturing for local consumption and export, and continue development of tourism.

Expansion of fisheries and growth of import-substitution industries are included in the plan. Sugar production is to be improved by increasing yields through mechanization, improved cane varieties and force-back cultivation. Fisheries are to be expanded by purchase of eight additional 70-foot vessels and construction of a fish processing plant and dockside refrigeration facilities. Manufacturing development will stress import-substituting industries, including ready-wear and fabrics.

Financing will come from such sources as current budget and internal borrowings as well as from export credits and loans from the IDB, $14.65 million, Caribbean Development Bank, $8.15 million, and World Bank, $3.9 million.

Prospective sales of U.S. goods and services in connection with the capital expenditures include plants for cement, $8 million; pork processing, $2 million; fish processing and refrigerating facilities, $3 million; synthetic textile mill (vertically integrated), $3 million; road construction, $4.4 million; airport improvement, $13 million; sewage system, $4 million; and deep water harbor modernization program, $5 million.

A summary of the plan is available on a loan basis from the Latin America Division, OIM/BIC, U.S. Department of Commerce, Washington, D.C. 20230.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about U.S.-sponsored exhibits abroad, licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

U.S. Promotions Abroad

Pollution Control Systems and Equipment Catalog Exhibition. Paris. Sept. 10-14. The French Government, becoming increasingly aware of the pollution control problem, has established regulations which have generated a growing market for pollution control systems and equipment. Imports in this field are expected to exceed $85 million for the 1974-1975 period. This catalog exhibition will be held as part of a major French exhibition—Environmental Expo '74—Man, Air and Water—and should prove beneficial to U.S. companies which have appropriate equipment and systems for the pollution control and solid waste disposal requirements. Call Robert E. Peterson, 202-967-3973.

Business Automation Equipment, Joint Export Establishment Program (JEEP). Milan Trade Center. Sept. 20-25. In 1973 the demand for business automation equipment in Italy was $480 million and by 1976 is expected to exceed $900 million. Emphasized will be accounting and bookkeeping systems; desk-top and mini-computers; high-speed copiers; microfilm equipment including retrieval, storage and filing; computer cash registers and terminals; punched tape and magnetic tape billing and invoicing machines; microfiche; computer terminals with business applications. Call Robert Welsh, 213-824-7581.

Biomedical Equipment. Frankfurt and Paris Trade Centers. Sept. 30-Oct. 3, and Oct. 8-11, respectively. This tandem scheduling gives U.S. firms the opportunity to participate in either or both events. The biomedical market in France is growing rapidly. The U.S. supplies about one-sixth of French imports and one-third of Germany's in this field. Call Bob Wallace, 202-967-3748.

Shipboard, Port and Marine Equipment Catalog Exhibit. Stockhold. Oct. 3-5. This exhibit will be held in conjunction with the Nordic Shipbuilding Conference sponsored by the Swedish Royal Institute of Technology and will draw participants from Sweden, Norway, Denmark and Finland. The largest shipyard outside of Japan and some of the world's largest ports are located in Scandinavia. Numerous expansion projects are planned which will offer excellent opportunities for export-minded firms in the U.S. Robert E. Peterson, 202-967-3973.

INDEX 74: Automotive Servicing Equipment, Repair Parts and Accessories Catalog Exhibit. Athens. Oct. 3-9. Car ownership is rapidly becoming a necessity in Greece and demand for quality service and repairs is expanding. In order to meet this demand, large quantities of service and repair parts and accessories will be imported. This is the opportune time for U.S. sellers to aggressively investigate this market. Call Robert E. Peterson, 202-967-3973.

Health Care Equipment Catalog Exhibit. Buenos Aires. Oct. 7-11. The Argentine Government is currently emphasizing improved health care for the country's over 24 million people and plans an integrated national health system. Expenditures on investments in health care are expected to be $100 million during the 1974-1977 period. Plans should generate good sales opportunities. Robert E. Peterson, 202-967-3973.

Automotive Servicing and Repair Equipment Catalog Exhibit. Sao Paulo and Belo Horizonte. Oct. 7-15. Motor vehicle production and use is booming in Brazil. Servicing facilities, however, have not kept pace. In order to upgrade facilities, the auto servicing industry is expected to import $6.9 million worth of equipment by 1978, 70 percent of which should be U.S. products. Call Robert E. Peterson, 202-967-3973.

Pharmaceutical and Cosmetic Manufacturing Equipment and Materials Exhibition. Milan Trade Center. Oct. 8-12. The pharmaceutical and cosmetic industries represent a major sector of the Italian economy as indicated by production figures that totaled over $2 billion in 1973. These industries are projected to expand at an average annual rate of 8.8 percent. U.S. manufacturers of production and packaging equipment and raw materials and substances will find a ready market for their products in Italy. This exhibition has been timed to coincide with the International Chemical Engineering Exhibition (MAC '74) on the adjacent Milan Fairgrounds. Beryl D. Cohen, 202-967-4508

Plastics Production Equipment (JEEP). Taipei Trade Center. Oct. 14-18. Manufactured plastic products rank third among the foreign exchange earnings of Taiwan. To insure the future of this vital industry, major projects are under way to make the country almost self-sufficient in petrochemicals and plastics. Industry is striving to upgrade standards of product design, quality and production. As a result, equipment requirements are becoming more sophisticated. Including instruments and controls, the market is estimated at about $6 million. This event, limited to new to export/new market firms only, combines an exhibition with a technical seminar. Contact Donald L. Schilke at the U.S. Department of Commerce District Office, 1406 Mid Continental Plaza Bldg., 55 E. Monroe St., Chicago, Ill. 60603, or telephone 312-353-5096.

U.S. Agricultural Equipment Trade Mission to Ethiopia, Sudan, and Kenya. Oct. 14-25. In light of priority emphasis of the governments of Ethiopia, Kenya and Sudan on agricultural development and the large existing U.S. share of the market in these countries, the U.S. Department of Commerce is sponsoring this mission to Addis Ababa, Nairobi and Khartoum. The following equipment has been identified as high priority items for these markets: cultivating equipment; harvesting machinery; oil-seed processing machinery; coffee processing and related equipment; non-road tractors; poultry, livestock and dairy equipment; and irrigaion pumps. Contact Edward Wason, 202-967-4918.

Wood and Wood Related Industries Catalog Exhibit. Oporto, Portugal. Oct. 18-27. This exhibit, to be held in conjunction with the 1st Exposition of Wood and Wood Related Industries, Furniture, Paper and Forestry Products, will encompass all aspects of the wood industry including equipment for logging, sawmills, and finishing operations plus wood-derived products such as building materials, furniture and paper (including equipment to produce these items). Portugal's imports in all of these areas totaled $49.4 million in 1972 and are increasing steadily. Call Robert E. Peterson, 202-967-3973.

Data Communications Equipment and Systems. London Trade Center. Oct. 21-25. Domestic annual consumption of data communications equipment and systems throughout the United Kingdom continues to soar, reaching nearly $500 million by the end of 1973. Increasing at an annual rate between 13-15 percent, shipments from the U.S. to the U.K. were estimated at $100 million last year. This event is scheduled for the inauguration of the new, more modern, spacious and accessible U.S. Trade Center facilities in London, located at 4/5 Langham Place. Call Robert Blake, 202-967-3276.

Machine Tools Exhibition. Mexico City Trade Center. Oct. 21-25. Imports of metalworking equipment from the United States are expected to increase substantially. The overall market potential for metalworking machine tools and metal finishing equipment for metal parts has been forecast to reach $102 million, a compound rate of 8 percent annually, by 1978, despite growing local production. Call Mary Wiening, 202-967-5037.

Computers and EDP Equipment Catalog Exhibit. Zagreb, Yugoslavia. Oct. 21-26. This exhibit will be part of INTERBIRO, the 5th International Exhibition of Data Processing Systems and Office Equipment. The Yugoslav market for computers and EDP equipment is growing rapidly and is expected to reach $45.6 million by 1977. Minicomputers and peripheral equipment are of special interest. Call Robert E. Peterson, 202-967-3973.

Projekt 2000—International Trade Fair on Pollution Control. Graz, Austria. Oct. 23-26. American manufacturers and suppliers of equipment for the control of air and water pollution, noise abatement, sewage treatment, solid waste disposal, and radiation control have a special opportunity to gain increased sales throughout Europe by exhibiting in the U.S. pavilion. Trade visitors from the governmental buying units of Eastern Europe concerned with environmental protection will be in heavy attendance. Also available to exhibitors only, on a selective basis, is a trade mission to Switzerland anf Yugoslavia immediately prior to this show. Call David Katz, 202-967-3748.

Advanced Educational and Training Aids (JEEP). Tokyo Trade Center. Oct. 24-26. With a population of 109 million people and a school attendance of over 95 percent, improved techniques and equipment for Japan's educational systems are constantly being sought. In addition, Japanese businesses actively try to provide training opportunities for their employees. There is, therefore, an active market for industrial training equipment and new learning techniques. This exhibition is limited to new-to-market U.S. participants and is designed to put them in contact with potential representatives who can handle sales on a continuing basis. Call John Wolf, 202-967-4056.

Building Products and Construction Equipment. Stockholm and Paris Trade Centers, Oct. 28-31 and Nov. 5-8, respectively. Commerce is offering manufacturers and suppliers of building products and construction equipment a splendid opportunity to gain increased sales in France and Scandinavia by exhibiting at one or both of these shows. France, which has the fastest growing economy in Western Europe, and the Scandinavian countries of Sweden, Norway, Denmark, and Finland, offer bright prospects for sale of U.S. products in the building field. Call Andre Williams, 202-967-5373.

Materials Handling Equipment. Buenos Aires Trade Center. Nov. 4-8. Increased government funds for modernizing public enterprises and services and significant private industry investment are generating rapid growth in the Argentine market for materials handling equipment and systems. Sales are expected to grow at an average annual rate of 16 percent during 1974-77, totaling over $425 million for the period and exceeding $118 million in 1977. Lifting, loading, and conveying equipment accounts for most of Argentina's materials handling equipment imports; imports of this equipment are expected to total nearly $18 million in 1977, reflecting a 7.5 percent annual growth rate over the 1973 estimate of $13.5 million. Imports of industrial vehicles are expected to grow at an average annual rate of 9 percent, increasing from an estimated $2.2 million in 1973 to over $3 million in 1974. Call Vicky Eicher, 202-967-4463.

Food Processing & Packaging Equipment Technical Sales Seminar. Thailand, Indonesia, Malaysia. Nov. 9-26. Improving consumer tastes, expanding population and government backing make the outlook particularly bright for U.S. exports of food processing and packaging machinery to these three markets in the next few years. Equipment imports for improved processing of commodity exports and for domestic foodstuff consumption make technical information efforts in these countries a must foc 1974. Call Wyn Coates, 202-967-5286.

Analytical Instruments and Systems for Scientific and Industrial Research. London Trade Center. Nov. 11-15. U.K. imports of analytical instrumentation now make up 40 percent of the $100 million market, and are expected to double by 1977. U.S. sales have increased from $7.6 million in 1971 to $12.7 million in 1973. Demand for new instruments—especially high-technology items—is being spurred at this time by problems of standardization and competition resulting from U.K. entry into the Common Market, by increasing concern with environmental problems, and by development of North Sea oil and gas fields. Products to be exhibited are chromatographic, spectroscopic, and high and low temperature research instruments, accessories and parts. Call Jim Lamont, 202-967-4541.

Industrial Process Controls and Instrumentation Equipment. Milan Trade Center. Nov. 13-19. High sales potential exists in Italy for process measuring and control instruments and systems for measuring, recording and controlling physical and chemical properties, such as temperature, pressure, vacuum fluid flow, liquid level, mechanical motion, humidity, density, combustion and chemical anlysis. Control and regulator valves, servo mechanisms, process control computers and related products also rank high. This exhibition will run concurrently with BIAS, the large international automation and instrumentation show, on adjacent fair grounds. Call Sam Spaulding, 202-967-4508.

Audio-Visual Educational Aids Exhibition. Tehran Trade Center. Nov. 17-21. Market research points to a booming market in Iran for audio-visual educational materials during the next several years. The Iranian Fifth Development Plan (1973-77) calls for more than $6 billion to be spent on education. Call Don Ryan, 202-967-4652.

Business Equipment Exhibition. U.S. Trade Center, Taipei. Nov. 18-22. Taiwan continued its remarkable economic growth during 1973, and into 1974. Imports from the U.S. increased 75 percent in 1973 over 1972, reaching a 25 percent share of Taiwan's total imports. Imports of business equipment into Taiwan are expected to be approximately $20 million in 1974, with some $7 million coming from the U.S. While GNP is growing at around 8 percent this year in spite of the energy crisis, estimated growth of the business equpment market is 18-25 percent per year for the next three years. Principal equipment in demand includes: electronic equipment, pocket and programmable calculators, mini-computers, accounting machines, photocopying and other duplicating equipment, advanced model cash registers, microfilm equipment, time recorders and other general office equipment such as binding and collating machines, and sophisticated filing systems. Call Monroe Aderhold, 202-967-2051.

U.S. Business Equipment Exhibition. Melbourne. Nov. 18-22. This exhibition will provide U.S. business equipment manufacturers a unique opportunity to either expand sales or enter the important Austrailian business equipment market, which has expanded to a level 70 percent above that of 1969. Austrailia's imports of business equipment, including computers and supplies, reached $172 million in FY 1973. Although computers have shown the most outstanding growth records, other areas are expanding rapidly as more modern and efficient business machines are being sought by both government and industry. This factor, accompanied by both the Australian and U.S. currency adjustments and unilateral Australian tariff reductions, has created an overwhelming preference for U.S. business equipment. Contact Fred Groh, 202-967-3646.

Electronica 74. Munich. Nov. 21-27. Commerce will have an American trade section at this major event, the world's largest trade fair for the electronics industry, covering electronic components, test and measuring instruments, and production equipment for the electronics industry. Phenomenal results by U.S. participants at the last Electronica plus recent market information indicates outstanding success for exhibitors in the American section of this show. Call nearby Commerce District Office.

Minicomputers and Peripherals. Paris Trade Center and Frankfurt Trade Center. Nov. 25-28 and Dec. 3-6, respectively. Commerce is sponsoring these two exhibitions to facilitate participation in both; however, an exhibitor may elect to participate in either one. The outlook for sales of minicomputers in both France and Germany during the 1973-77 period is extemely favorable. Participants in previous exhibitions of this type have reported excellent results and market research indicates the potential to exceed even these successes. Call Don Schmadel, 202-967-2177.

Vacuum and Cryogenic Equipment Technical Sales Seminar to Czechoslovakia, Hungary and Romania. Dec. 1-14. Participants are sought for a 7-member seminar covering industrial, laboratory and medical applications of vacuum anf cryogenic technology. Presentation of technical papers will be followed by business meetings with appropriate institutes, foreign trade officials and industrial trusts. Initial contact with target audience has elicited enthusiastic response. Call Fred E. Crosley, Jr., 202-967-5285.

High Performance Production Materials. London Trade Center. Dec. 2-6. The United Kingdom is one of the world's largest buyers of U.S.-manufactured high performance products and use of these materials is expected to grow at a high rate for many years. British manufacturers have expressed special interest in specific new techniques and materials for producing reinforced plastics, high-temperature/high pressure plastics, super alloys, sintered and other powder metal forgings and castings and silicon carbide ceramics. Other products with high sales potential include: plastics and resins; glass fiber reinforced plastics; carbon fiber reinforced composites; asbestos reinforced plastics; special metals and alloys; powder metals; and special ceramic and nonceramic refractory materials. Call C. Edward Walls, 202-967-4256.

Home and Office Furnishings (JEEP). Singapore Trade Center. Dec. 4-6. The boom in home and office construction in Singapore and rapidly increasing personal incomes offer an excellent opportunity for U.S. interior decorating firms and manufacturers of high quality household and office furniture, carpeting and other products for interiror decorating, to enter the Singapore market. This exhibition, limited to new-to-market U.S. firms, is designed to locate representatives who will handle sales on a continuing basis. Call Fred Farmer at the Greensboro, N.C. District Office, 919-275-9111.

Pollution Control Equipment. Stockholm Trade Center. Dec. 9-13. U.S. manufacturers and suppliers of air and water pollution control equipment, solid waste treatment equipment and noise abatement equipment have an outstanding opportunity to introduce new products and improve their share in the expanding Scandinanvian market by exhibiting at this show. Recent market research conducted in Denmark, Finland, Norway and Sweden points to continued high demand, especially for sophisticated detection and control equipment. Call Dave Brann, 202-967-4443.

Modern Merchandising. Frankfurt Trade Center. Jan. 14-17. The U.S. is one of Germany's leading suppliers of point-of-sales equipment, materials handling equipment, security equipment, background music equipment and other equipment for the wholesale and retail trade. Purchases of merchandising equipment are expected to grow rapidly during the next three years, with continued imports from the U.S. Call William Dawson, 202-967-4941.

Avionics and Airport Support Equipment. Milan Trade Center. Jan. 14-18. The Italian aviation industry is commencing an upsurge in development of new aircraft and modernization of airports and support equipment. With new designs and future development work already in progress and the continuous influx of tourists and jumbo jets, the Italians require the most advanced and updated forms of equipment. Rough estimates put Italian market potentials for avionics equipment in 1975 at $28-$31 million, while the market for support equipment is virtually unlimited. The Italian Government has recentlv approved the expenditure of $159.5 million over four years for airport support equipment. Call Mara Yachnin, 202-967-2434.

Industrial Instrumentation. Mexico City Trade Center. Jan. 20-24. The Mexican market for instruments for use in industrial applications is growing at a rate approximately twice as fast as the economy in general. Opportunities are open to manufacturers of industrial process control, materials test and anlytical instrumentation, as only basic instrumentation is produced in Mexico and U.S. equipment is well known and preferred. Call Porter Clary, 202-967-5040.

Printing & Graphic Arts Equipment Exhibition & Seminar. Taipei Trade Center. Jan. 27-31. Prepress, press, bindery, finishing room machinery & related equipment. Limited to 18-20 U.S. firms. The immediate and long-range outlooks in Taiwan are very promising, with growth of their local and export markets steadily increasing for printed materials. Taiwan's imports of printing and graphic arts technology, machinery, equipment and related supplies in 1973 was estimated to be $4.6 million. By 1977 it is expected that imports of these materials will reach $7.4 million, with great strides in offset, programmed phototypesetting, color-separation and plate-making, multicolor production, sheet-fed offset presses, metal decorating and silk-screen processes. These facts, coupled with Taiwan's recent shift in sourcing policy away from traditional Japanese suppliers and toward the U.S., improve prospects for profitable business activity. Call Dave Horridge, 202-967-2798 or 5545.

Automotive Diagnostic and Repair Equipment Exhibition. Tehran Trade Center. Feb. 2-6. The Government of Iran has committed $140 million for expansion and modernization of vehicular production and assembly facilities between 1973 and 1978. As a result, vehicle registration is expected to exceed one million by 1978 (double the 1973 figure), which will greatly raise demand for subject equipment. Research has indicated an excellent market in Iran, since the country produces none of this equipment and relies

entirely on imports. This exhibit will be the first concerted effort to promote U.S. exports in this product category to Iran. Contact Michel Smith, 202-967-4652.

Microwave Technology Exhibition. Paris Trade Center. Feb. 3-7. The French market for microwave systems and equipment, circuits, components, test and measuring instrumentation is expected to expand sharply in the next few years. Spurred by a need to update outmoded communications systems and to utilize microwave applications for various military and industrial needs, the French are expected to spend over $960 million on microwave products from 1974-1977. American made or designed equipment and components account for a leading share of this splendid market. Call Eugene Shaw, 202-967-2177.

ACT '75—American Computer Technology 1975—Tokyo Trade Center. Feb. 3-8. The Government of Japan has announced that as of Aug. 4 it will automatically approve applications by foreigners for up to 50 percent investment in newly established companies for the manufacture, sale, or leasing of computers and computer-aided systems. By the end of 1975, 100 percent foreign ownership will be allowed, and all quantitative restrictions on importation of computers and related equipment will have been lifted. It has been estimated that by 1977 Japan will be importing $1 billion worth of computers, peripherals, and software annually to augment its $9.7 billion annual consumption of locally-made computer products. Contact Maurice Shea, 202-967-2461.

Power Sources—Energy 75. Milan Trade Center. Feb. 8-12. The energy crisis has redirected attention toward power generation and related quipment. The Italian market for power equipment, both primary and standby, is open, broad and very promising for American producers as they can offer the most advanced products in terms of performance, reliability and automation. Market research concludes that the outlook for imports from U.S. suppliers looks especially good in the growing nuclear generation field. There is strong interest as well in geothermal and solar power, and other new approaches to power generation. The exhibit will be held in conjunction with INTEL 75-1st International Exhibition of Electrical Engineering. Call Carolyn Allen, 202-967-2434.

Printing & Graphic Arts Equipment. U.S. Trade Center, Sydney. Feb. 9-14. U.S. exports to Australia have been increasing at a rate 70 percent above last year due to a booming economy, revaluation of the Australian dollar and the currencies of other major exporters to Australia, reductions in Australian tariffs, a high rate of inflation, and shortages for many types of products. The market for printing equipment in Australia is about $40 million this year, 80 percent of which is imported mainly from Germany, the United Kingdom, and the United States. The U.S. share of this market has fluctuated at between 20 and 30 percent and could be expanded. Purchases of this equipment tend to increase at a rate of 8 percent per annum. Contact Fred Groh, 202-967-3646.

Recreational/Leisure Time Goods. U.S. Trade Center for Scandinavia in Stockholm. Feb. 10-14. U.S. manufacturers of summer and winter sports/recreational equipment, sports apparel, aircraft and aircraft equipment, boats and accessories, and other all-year-round products such as camping and physical fitness equipment now have an excellent opportunity to exhibit their latest products at "Leisure Time/U.S.A." Scandinavians now have a shorter workweek, longer vacations and more money to spend on recreational products. Swedes alone spent $1.7 billion on recreation in 1971. The average Swedish family of four spends from 3-5 percent of its gross income on recreation. Household income in Sweden in 1974 is expected to rise well over 15 percent which, allowing for consumer price increases, will represent a 5.3 percent rise in real disposable income. Call William Beiring, 202-967-3276.

Sales opportunities in 5 U.S. commercial exhibitions, 7 catalog exhibitions, 32 shows at U.S. Trade Centers, 1 trade mission and 2 technical sales seminars are being offered to present and potential U.S. exporters between now and May.

Each Trade Center exhibition is limited to one particular line of products and centers are located in Beirut, Buenos Aires, Frankfurt, London, Mexico City, Milan, Paris, Seoul, Singapore, Stockholm, Sydney, Taipei, Tehran, and Tokyo. For further information on the Trade Center shows described or for more facts on U.S. exhibitions, **write:** *Director, Office of International Marketing, Room4015, U.S. Department of Commerce, Washington, D.C. 20230.*

U.S. specialized trade missions and technical seminars are comprised of groups of U.S. businessmen organized by the U.S. Department of Commerce to travel abroad to promote the export of U.S. goods and services produced by their particular industry. **Write:** *Trade Missions, Room 4219, U.S. Department of Commerce, Washington, D.C. 20230.*

Automotive Diagnostic and Repair Equipment. Offsite Trade Center Show, Beirut. Feb. 10-14. Up to 15 U.S. firms will have the unusual opportunity to participate in this event in tandem with a similar Trade Center show in Tehran Feb. 2-6. The site is the Industry Institute in Beirut. As a hub of commercial and financial activity in the Middle East, regularly attracting business visitors from throughout the region, Beirut is a logical site for an exhibition designed to capitalize on the rapidly expanding market potential in such target markets as Saudi Arabia, Kuwait, the United Arab Emirates and other Gulf states, in addition to Lebanon. Growing consumer affluence in these countries promises a steadily increasing demand for automobiles, accessories, and parts, and offers excellent opportunities for sales of servicing and repair equipment. Contact Michel Smith, 202-967-4652.

Plastic Production Equipment. Mexico City Trade Center. Feb. 10-14. With an increase in purchases of plastics production equipment on the order of 40 percent annually over the last several years, Mexico's market for U.S. equipment in this category is excellent. Now a producer of petrochemicals. Mexico aims at future self-sufficiency in plastics feedstocks, so expansion in the industry continues. Call Porter Clary, 202-967-5040.

Materials Test Instrumentation and Equipment. Frankfurt Trade Center. Feb. 11-14. An increase in both public and private research and evelopment activity combined with more exacting specifications imposed by industrial customers has greatly strengthened the German market for materials test instrumentation and equipment. Imports of selected testing instruments are likely to reach $68 million, of which the U.S. share is expected to be 28 percent. Call Don Schmadel, 202-967-2177.

Pulp, Papermaking and Converting Equipment Exhibition. U.S. Trade Center, Paris. March 3-7. U.S. manufacturers of the broad range of machinery, equipment and instrumentation used in the pulp and paper industry have a special opportunity to enter or increase sales in this fast growing import market. With the demand for paper skyrocketing, local manufacturers fall far short of meeting equipment needs. Furthermore, strict pollution control regulations and the ongoing modernization trend are resulting in demand for the most sophisticated process control and pollution control equipment and instrumentation. There is also much interest in waste paper processes. Call Robert B. Wallace, 202-967-3748.

Pharmaceutical Production Equipment Exhibition. Mexico City Trade Center. March 3-7. Strongly expanding Mexican Government medical care programs as well as stricter controls in production and higher quality required from local laboratories offer good opportunities to U.S. suppliers of a wide range of machinery, equipment and instrumentation used in the production of pharmaceuticals. The U.S. share of total imports is about 70 percent and a majority of local needs must be imported. Call Mary R. Wiening, 202-967-5037.

"PRINT-PACK USA" — International Printing and Packaging Exhibition. Sao Paulo. March 3-9. The Brazilian market for printing and graphic arts equipment is $52 million and growing 13 percent a year, and the market for packaging machinery is $28 million and growing 27 percent, offering hot sales opportunities. Combined imports hit $63 million last year and the U.S. holds a major share (37 percent in printing, 25 percent in packaging) which should go higher in the next 3 years. Opportunities are especially good for form-fill-seal, shrink wrapping, thermoformers, vacuum and gas packaging, can-making, cartoning, can-packing, bottle-filling, case filling and sealing, bag top labeling and code marking equipment. Web-offset and flexographic presses have excellent potential, as do phototypesetting, editing and automated photocomposition equipment. Contact Pete Field, 202-967-3871.

Apparel Manufacturing Equipment Exhibition. Frankfurt Trade Center. March 18-21. Inflationary factors and labor scarcity are inducing apparel manufacturers to streamline operations to reduce overhead and maintain competitive prices and output. Sales potential is high for most types of automated, labor saving or cost cutting production equipment and specialties. With easing of bank credits and interesh rates, and elimination of investment taxes on capital goods, apparel makers are in position to purchase. Equipment sales are steadily climbing. An annual increase of 6.25 percent is projected through 1977 in Germany. Call Charles Whitley, 202-967-5381.

U.S. Pavilion, Paris Air Show, Le Bourget Airport. May 30-June 8. The export market is the brightest spot in the U.S. aerospace industry this year. In 1973 U.S. aerospace exports reached an all-time high of $5.2 billion, 27 percent of production. During the period 1968-1973, over 46 percent ($8.2 billion) of total U.S. exports ($17.7 billion) of civilian and military aircraft, engines and parts were shipped to Western Europe. Sales prospects for 1975 are particularly good for general aviation aircraft, helicopters, military aircraft for the NATO air forces, avionics and airborne instrumentation, aircraft engines and parts, airport and ground support equipment (with special attention on security equipment), and components. Increasingly fierce European competition makes it more necessary than ever for U.S. aerospace companies to see and to be seen at the 1975 Paris Air Show, not only to increase sales, but to maintain our traditionally high export market share. Call Michael G. Hanpeter, 202-967-4961.

Ecuador Requests Bids On Metal Silo Plants

The Ecuadorean Government has invited specialized firms to bid for construction and equipping of 14 plants of metal silos for storage of small grains with a capacity of 2,000 to 5,000 metric tons each for a total of 47,000 metric tons. The bid will remain open until Aug. 22. General information, documents and plans are available at the Ministry of Agriculture, Quito, after payment of $400 which is not reimbursable. Interested firms may also obtain information about the project from the Embassy of Ecuador, 2535 15th St., N.W., Washington, D.C. 20009.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Foreign Investment Services Staff, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

1521 — BRAZIL — One of Rio de Janeiro's largest and oldest construction companies seeks joint venture to build apartment buildings and homes. Firm seeks financial participation to finish eight apartment buildings currently under construction and to expand operations. Established in 1952, company has built numerous apartments of condominium type. It has 500 employees. Bernardo Matz, Construtora Canada, Av. Rio Branco 173, 12º Andar, Rio de Janeiro, GB, Brazil. WTDR. P-74441, OPIC. Additional details available from Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230.

2052 — SAUDI ARABIA — A leading catering firm seeks joint venture with U.S. company to produce **enriched cookies**. Plant would produce 150,000 pieces of 90-gram cookies daily. U.S. partner would contribute equity, know-how, machinery and equipment on terms to be negotiated. Firm provides catering services to Saudi Arabian and other international airlines, schools, hospitals and Saudi Army. Established in 1959, company employs 200. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-74464.

2061 — ECUADOR — Owners of 32,000 acres of land seek experienced American investors to contribute capital, machinery and know-how to operate **sugar cane mill**, which would grind 7,000 tons of cane daily to produce granulated sugar for domestic consumption and raw sugar for export. Land is reportedly of excellent fertility and luminosity where suitable irrigation facilities can be easily installed. Project would be given priority treatment by government. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-74461. OPIC.

2099 — ISRAEL — Firm is interested in joint venture with U.S. company capable of supplying know-how to establish a plant to produce 3,000 to 5,000 tons of **wet and dry yeast** annually. Offers of turn-key construction of plant are also of interest. Feasibility studies being prepared. Three of Israel's largest bakeries expected to be shareholders. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74427. OPIC.

2328 — SENEGAL — A Swiss investor with authorization from government to construct a clothing plant in Senegal to produce **jeans** is seeking an American partner. U.S. partner would contribute approximately $60,000 or 37 per cent of equity. Plant would initially employ 130. Products would be marketed in Africa and Europe. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74443, OPIC.

2339 — BRAZIL — A leading manufacturer of women's **swimsuits, bikinis, slacks and pant suits** is seeking a U.S. firm willing to negotiate a joint venture agreement. Swim wear currently manufactured by firm is considered to be second or third most popular in middle to upper-income market in State of Sao Paulo. Firm produces 24,000 pieces of clothing monthly. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74419. OPIC.

2400 — WINDWARD ISLANDS — Government of Dominica seeks U.S. participation to develop **timber and wood processing** industry on the island. Government is prepared to grant exclusive timber rights plus fiscal incentives, to an investor. It is interested in establishment of sawmill and veneer manufacturing facilities. Dominica has forestry area of 76,761 acres, two-thirds on crown lands. A Canadian consultant firm has prepared report on project. Permanent Secretary, Department of Planning and Development, Government Headquarters, Roseau, Dominica, Windward Islands. Further details available from: Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74411. OPIC.

2821,2869 — CHILE — Government-owned firm has completed feasibility studies and seeks long-term credits and/or direct capital investment for construction of the following kinds of **chemical plants** with estimated cost and annual capacity as noted: polypropylene, 30,000 metric tons, $25 million; perchlorethylene, 6,000 m.t., and carbon tetrachloride, 6,000 m.t., $3.2 million; freon plant to produce 1,000 m.t. of F 11 (trichlorofluormethane) and 4,000 m.t. of F 12 (dichlorodifluoromethane), $5.8 million; dymethyl terephthalate 25,000 m.t., $18 million; polyester chip plant, 15,000 m.t. $10 million; styrene-polystyrene, 25,000 m.t., $14 million. Gustavo de La Piedra, Gerente de Desarrollo, Petroquimica Chilena S.A., Pedro de Valdivia 33, Santiago, Chile. P-74423.

2834 — SWITZERLAND — Firm with own manufacturing facilities seeks to expand its activity by **acquiring licenses in organic fine chemicals** for applications by pharmaceuticals industries, research laboratories, etc. Especially interested in hetrocyclic combinations. Firm, well-known in the field of pharmaceutical chemicals throughout Europe, has facilities in Italy, Germany, and Austria. Has substantial annual sales, highly qualified sales organization and employs modern manufacturing equipment. Financially controlled by well established U.S. firm. G. Bachmann, Cilag Chemie AG, Hochstr., 8201 Schaffhausen, Switzerland. P-74444.

3079 — BAHRAIN — Seeks license or joint venture to produce **medical, surgical and other hospital plastic products** including disposable items such as syringes, containers, etc. Firm, a division of the large reputable A.A. Zayani & Sons Co., produces various household plastic items, bottle crates, jerry cans and water and conduit pipes. Majid Zayani, Manager, Gulf Plastic Industries, P.O. Box 894, Manama, Bahrain. Telex: 8315/8320. P-74445.

3261 — JAPAN — Within three months, firm will begin construction of luxury hotel complexes in Tokyo and Osaka. Firm desires joint venture or licensing arrangement with a U.S. **mechanical engineering company with expertise in plumbing know-how and cost control.** Interested firms should contact McDonald W. Sullivan, Vice President, Ramada-Chori Japan, Inc. 2-13-2 Hachobori, Japan. P-74413.

3295 — MEXICO — Seeks joint venture or any other suitable arrangement with a U.S. firm in the **kaolin processing business**. Firm has processing plants and three mines in Hidalgo. Because of its location and Mexico's need for this industry, the kaolin plant will enjoy a tax exempt status for next eight years. Israel Strauch, Director, Caolines Apulco, S. A., Zacatecas 229-308, Mexico 7, D.F. Telephone, 574-5816. P-74409.

3297 — INDIA — Seeks technical assistance for manufacture of following: (1) **Carbon refractory** — carbon cathode bricks for aluminum industry, carbon block for blast furnace, carbon paste and powder. Annual capacity 10,000 tons per annum. (2) **Special refractories** — fused grains of alumina, mullite, chromite and magnesite and fused refractory blocks and bubbled aluminia. Annual capacity 10,000 tons per annum. Firm is also interested in purchasing refractory plant equipment. Capital outlay for project has been estimated at $7.65 million. Write: Managing Director, IPICOL, Post Box No. 118, 3-A Satyanagar, Bhubaneswar, Orissa, India. P-74468, OPIC.

3494, 3873 — JAPAN — Seeks license to manufacture an **automatic control component** designed to eliminate turning of faucet valves on and off manually in bathroom basin sets. Firm also seeks license to manufacture and sell **wall clocks** having no moving parts by use of a crystal liquid. Presently produces battery operated wall clocks and products intended for use by building and residential home contractors and electrical contractors — for example, building materials, flooring and ceiling materials, electric controls, lighting equipment, electrical construction materials, interior decoration materials, home appliances. Maintains 13 factories throughout Japan and employs 12,000. Sales for 1973, $854,140,000. Matsushita Electric Works, Ltd., 1048 Oaza Kadoma, Kadoma City, Osaka Prefecture 571, Japan. WTDR. P-74420.

3540, 3560 — JAPAN — Leading machinery manufacturer seeks licenses to produce and distribute **metal forming presses; grinders** (especially plunge-cut type); **air compressors** (more than 10 hp.); and **heavy duty hydraulic pumps.** Japanese firm makes textile machinery, hydraulic equipment and machine tools. Has about 2,500 employees and operates five plants. Company has ample space and financial and personnel resources for expansion. It presently has licensing agreements with several major U.S. firms. S. Ueno, Senior Staff Member, Patent Department, Teijin Ltd., Iino Bldg., 1-1, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo 100, Japan. WTDR. P-74448.

3541 — CHILE — Recently established government owned firm seeks license to produce **milling machines and lathes.** Manufacture of milling machines has been assigned Chile by Andean Group. Sr. Luis Ilabaca, Gerente, Fabrica Nacional De Maquinas Y Herramientas (FANAMHE), Casilla (P.O.B.) 1687, Santiago, Chile, phone 259912. P-74449.

3549 — JAPAN — Manufacturing rights for **automatic welding equipment and assembly devices to be used in automotive and other industries.** Also seeks licenses to **produce industrial environmental control and treatment equipment.** Firm is major manufacturer of hydraulic equipment, machine tools, textile machinery and aircraft components. It operates five plants and has facilities and financial resources for expansion. Company employs 2,500. S. Ueno, Senior Staff Member, Patent Department, Teijin Ltd., Iino Bldg., 1-1, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo 100, Japan. P-74450.

3554 — UNITED KINGDOM — Manufacturing and distribution rights for **printing, packaging, paper converting and related machinery.** Company produces printing equipment and employs 1,000. Operates large machine shop and

extensive assembly and sub-assembly facilities. Also, maintains good research and development facilities. P. J. Cope, Managing Director, Linotype & Machinery Ltd., P.O. Box 6, Norman Road, Altrincham Cheshire, U.K. P-74415.

3564 — ITALY — Seeks license to manufacture **electrostatic filters** for handling oil combustion fumes in industrial furnaces and thermoelectric power plants. Company presently produces industrial plant automation, air and water pollution and nautical equipment. Also engaged in related engineering activities. Company employs 500 and reports annual sales of $13 million. Has high technical qualifications and business reputation. Michele Andreotti, Termokimik Corp., Via Arbia 23, Rome, Italy. P-74451.

3600 — ITALY — Manufacturer of electronic equipment, switching devices and related products seeks licenses. Wants to make **detectors and burglar alarms, microwave and ultrasonic**, for warehouses, stores, villas and apartments; **analogical and digital measuring instruments** for the electronic production industry; and **analytical test and medical instrumentation** including electrocardiographs, monitoring systems for coronary care, artificial kidneys, pacemakers and clinical analysis instruments. Firm operates six plants, reports annual sales of around $30 million. Markets its products throughout Europe. Representatives of company plan to visit U.S. in August to discuss licensing agreements with American firms. Vito Ranieri, General Manager, CEME, Compagnia Equipaggiamenti Meccanici Ed Eletronici S.P.A., Piazza Mercato 11, 04100 Latina, Italy. Because of time factor involved, interested U.S. companies should telex: 68003 CEME, Rome. P-74455.

3600 — UNITED KINGDOM — Seeks joint venture or license to manufacture any type of **electronic product from industrial to telecommunications and audio.** Presently produces military and industrial electronic assemblies and business communication installations. Employs 250. K. G. Mill, Chairman and Managing Director, Kenmeleon Ltd., Queens, Galashiels, Scotland. P-74456.

3643 — UNITED KINGDOM — License or joint venture to manufacture and distribute **switches of rotary, push, lever and button type and assemblies for radio and TV industry.** Firm is also interested in making any **electro-mechanical switches** for industrial or professional application such as oscilloscopes and instrumentation automation. Presently, the company produces an extensive range of carbon film and wirewound potentiometers, plus switches for radio and TV industry. Company is part of a large group employing 23,000. Alex B. Faulds, "B" Company Management, Pye of Cambridge Ltd., St. Andrews Road, Cambridge CB4 1DP, England, Tel.: 0223-58985. P-74459.

3670 — INDIA — Seeks joint venture or licensing agreement to manufacture **electronic test and process control instruments.** Interested in arrangement whereby American participant would buy back bulk of production. Indian entrepreneur can provide at least 60 percent of necessary capital. Product interests include digital meters, transistor and diode testers, oscilloscopes and electronic medical instruments. Indian principal educated and has worked in United States. Further details available from Ray Jackson, President, Associated Business Exchange, 614 Glenwood Avenue, Raleigh, N.C. 27603. P-74414. OPIC.

3825 — YUGOSLAVIA — Major producer of electronic components seeks license to manufacture **electric meters.** Firm plans an annual production of 300,000 meters valued at $3 million. Approximately 60 percent of production would be three phase, two rate meters; 35 percent three phase, one rate meters; 5 percent monophase, one rate meters. Metric standards are 220 volts, 50 cycles. Maximum measurement tolerance class 2.5 up to 25 amperes. Yugoslav firm wants to initially assemble U.S. manufactured parts, gradually phase into local parts production. Already has set up assembly line to make meters, but is prepared to purchase process contract equipment and special machinery recommended by U.S. licensors. Reportedly, shortage of electric meters is critical in Yugoslavia and has begun to have detrimental effect on housing industry. Pavle Radeka, Centrocoop Export-Import, TRG Bratstva I Jedinstva 3, Belgrade, Yugoslavia. The Yugoslav manufacturer is Elektronska Industria N/S. WTDR. P-74422. OPIC.

3841 — BOLIVIA — Medium-size firm seeks joint venture with a U.S. company for manufacture of **medical and surgical equipment, instruments and apparatus.** Firm desires to expand its activities and plans to be in position to compete in hospital construction and make bids on various Bolivian government hospital projects in the near future. Sociedad Commercial Industrial Electromecanica Limitada — Sociel Ltda., Casill 873, La Paz, Bolivia. WTDR. P-74412. OPIC.

3861 — SAUDI ARABIA — Firm seeks joint venture with a U.S. company to establish a **photographic film manufacturing plant** in Riyadh. Firm is interested in obtaining machinery and equipment, technical know-how and U.S. technicians. Saudi Arabian Government has authorized them to establish plant within six months. Firm imports, wholesales and retails audio visual equipment; also is engaged in civil engineering construction works. Fawsy Bushnak, General Manager, Arabian Trade Corp., P. O. Box 1616, Riyadh, Saudi Arabia. P-74467.

6500 — SAUDI ARABIA — Group of land owners is seeking contact with U.S. firms interested in **developing property** located near the new Jidda International Airport site. Residential housing, shopping center, schools, would be included in complex. U.S. firm would finance, construct and supervise project on terms and conditions to be negotiated. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74416.

7394 — NIGERIA — Company seeks technical partner in expanding operations of existing **construction equipment leasing operation.** United Nigerian Co. Ltd., is established, reputable firm acting as equipment leasing organization as well as distributor of building materials, construction and electrical equipment. Maintains wholesale branches and sub-distributors throughout Nigeria. Annual gross sales turnover $2 million. Managing Director, P.K.C. Isagba, presently in United States. May be reached until mid August in care of Carole Samworth, Director, Summer Program, International Marketing Institute, 16 Garden St., Cambridge, Mass., 02138; telephone 617-547-9873. P-74418.

Indian Development Offers Potential For U.S. Firms

U.S. firms wishing to explore licensing arrangements may find of interest large-scale plans to develop Andhra Pradesh, one of the lesser developed states in South India. Officials of the Andhra Pradesh Industrial Development Corporation, established by the state government to promote industries, have advised that during the Fifth Five-Year Plan $430 million is expected to be invested on large-and medium-scale industries in the state. About 70 percent of the investment is to be in the public sector and the balance within the private sector.

Promotional work is under way for establishment of 23 projects falling within such major groups as the chemical, electronic, paper, metal and glass industries. Such undertakings will require technological know-how. For additional information, write: Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-74465. OPIC.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-927-2248) referring to the appropriate file number.

FAROE ISLANDS — A small company specializing in manufacture of a boat of the old Faroese shape is interested in having its **boat** made in U.S. under licensing agreement. The Faroe boat is considered the most seaworthy small craft in the world, according to the company. **File 2593**

GERMANY — An inventor has applied for a patent for a **carburetor and fuel pump system** which makes possible the use of hydrogen in combustion engines and as a fuel for heating purposes. He is interested in selling this invention to interested parties in U.S. **File 2594**

GERMANY — Firm is seeking a U.S. licensee for production of playing card **varnishes.** Firm is also interested in cross-licensing in the paint, varnish and lacquer area. **File 2595**

GERMANY — A well known firm is seeking licensee or joint venture partner for manufacture of **folding doors, sliding partitions and movable walls.** German firm is willing to invest about $500,000 in the venture. **File 2596**

GERMANY — Engineer is offering his Patent No. 3,066,611 for **electromagnetically driven membrane pumps** for conveying gaseous and/or liquid media. **File 2597**

JAPAN — A Japanese theater company is interested in establishing a **joint-venture drive-in theater** operation in U.S. Company is offering its **speaker system** which enables patrons to use their automobile radio speakers instead of traditional speakers from speaker stands. This new system, for which patents have been applied, involves conversion of movie sound tracks into very weak mid-waves transmitted via wire. Company is prepared to invest about $300,000 in a joint venture. **File 2598**

SWITZERLAND — Manufacture of high quality cosmetics offers for licensing its new line of **cosmetics** based on certain Alpine herbs known for their healing powers. Included are cleansing lotions and milks, and night and day creams. **File 2599**

SWITZERLAND — Company offers a "form closing" **injection machine** developed in connection with manufacture of insulators made from a mixture of epoxy resins and quartz sand as filling. Machines of this type are in use in plants of two American electrical appliances and equipment manufacturers. **File 2600**

Viet-Nam Plans Its First Export Processing Zone

Vietnam plans to open its first Export Processing Zone (EPZ) early in 1975. The EPZ of about 150 acres will be located at Tan Thuan Dong, next to the Saigon commercial port. The EPZ already has a well developed infrastructure, including two miles of roads, adequate electricity and water and good sewage system.

EPZ officials stress that the facility offers an opportunity for U.S. investors to take advantage of Vietnam's reasonable labor costs. In addition, American firms locating in the EPZ will automatically be granted all investment privileges. These include 100 percent foreign ownership and at least a five-year tax holiday. Companies will be able to import raw materials and semi-finished goods into the EPZ duty free. For further information, write Le Trong Muu, Director-General of the Export Processing Zone, 40-42 Nguyen Hue, Saigon 1, Vietnam. P-74425.

Foreign Trade Inquiries

These trade opportunities are based on reports received from the U.S. Foreign Service by the Trade Opportunities Division, Room 1322, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

Abbreviations used are: I (importer); D (distributor); M (manufacturer); A (agent); R (retailer). To avoid delays, requests for loan material must specify country, commodity, foreign government agency.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information, including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

Direct Sales

Crushed & broken stone

14290 — TAIWAN — Onyx marble, milk color, random size, 20 tons per three months. Quote C&F. Reply to—Mr. D.S. Lin, Pres., Ding Ying Enterprises, Ltd., 3-4, Alley 5, Lane 147, Hsin-Yi Road, Sec. 3, Taipei (106). Cable Dycorp; Tel 715879.

Building construction

● **15100 — BOLIVIA —** Tender for construction and supply of equipment for a hospital and poly consulting office with capacity of 120 beds distributed in the different specialties (Convocatoria No. 5-74). Bid deadline Oct. 30. Bid-letting authority: Caja Petrolera de Suguro Social Calle Obispo Cardenas 1415, 8th Piso Casilla de Correo 2693, La Paz. Plans and specifications (in Spanish) may be reviewed in Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 * 202-967-3602.

● **15100, 16100, 16200 — LIBYA —** The Council of Agricultural Development of the Libyan Arab Republic invites specialized international and local firms to bid for the reclamation and development of Arrgeba, Addesa, Algraya and Alhatia in the Obary area in Fezzan for the following works: water wells drilling, road networks, irrigation system, electricity, water network, farm houses, and infrastructures. Tender number is 3/74, and deadline is Aug. 24. Tender documents are obtainable upon payment of 500 Libyan dinars from Council of Agricultural Development, Alfath Road, P.O. Box 190, Tripoli. An initial guarantee of 100,000 Libyan dinars (US$296,000) must be made. Tenders must be accompanied by documents which prove previously executed similar work, character of the work, location and value, and financial references and brochures.

● **15200 — GREECE —** YMCA is offering for development a 15,500 sq. m. plot on the site of present premises in Thessaloniki, in downtown area and considered a cultural point of the city. There are no restrictions on the type of project but the YMCA believes the site is suitable for a tower office building, modern apartments or hotel, multi-story garage, or combination. YMCA will retain small area for own facilities. Costs will depend on nature of project but could be up to $20 million, according to informal estimates. YMCA proposes to contribute this property in return for interest to be negotiated on the project. Contractor is to provide capital. Once copy of the tender and architectural drawings is available for loan and one copy for office review from Construction and Bldg. Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 * 202-967-3602. A set may also be reviewed at the U.S. Dept. of Commerce Field District Office, 11444 Federal Bldg., 450 Golden Gate Ave., P.O. Box 36013, San Francisco, Calif. 94102 *415-556-5864.

Highway & street construction

● **16100 — CHILE —** Direccion de Vialidad invites foreign contractors to register for subsequent bidding for construction of 6.4 kilometer international highway between Valparaiso and Caracoles. Proposal will include: a) gravel sub-base, 7,000 cubic meters; b) crushed gravel base, 13,500 cubic meters; c) asphalt, 5 centimeters thick, 45,200 cubic meters; d) soft steel bars, 55,000 kgs.; e) concrete, 550 cubic meters; f) curbing, 1,400 meters; g) surface road drains, 6,800 meters. Project estimated at about $1 million, financed under Inter-American Development Bank loan 98-SF/CH. Complete specifications are available at offices of Ministerio de Obras Publicas y Transportes, Direccion de Vialidad, Morande 59, 3 Piso, Seccion Propuestas, Santiago, Chile, Attn: Sr. Santiago Sanchez Grau, Director de Vialidad Subrogante. Bid opening date will be announced in the specifications.

Heavy construction

● **16200 — ALGERIA —** *Bid for construction* of cofferdams for Sidi Abdelli Dam on Isser River (Oued Isser), three kilometers north of Sidi Abdelli, western Algeria. Tender documents (in French) at a cost of 500 DA (approx. US$131.58) available from Secretariat d'Etat a l'Hydraulique, 2 Eme Division des Barrages, Oasis, Saint Charles, Birmandreis, Algiers. Bids must be submitted by Oct. 4 to Monsieur le Directeur des Projets et Realisations Hydrauliques at above address. Offers must remain valid for 120 days past bid deadline.

● **16200 — IRAQ —** Bid for supply, installation, initial operation, and maintenance on a turnkey basis of a drainage pumping station (Tender No. 1/RAZZAZZA — 1/1974). Specifications, drawings and general conditions of contract may be purchased from Directorate General of Irrigation and Drainage Projects (Legal Section), Ministry of Irrigation, Baghdad, for 50 Iraqi dinars (US$170). This fee is not refundable. Tenders must accompany offer by a bank deposit receipt in favor of the Directorate General of Irrigation and Drainage Projects for ID 50,000. Time for completion is 1,000 days from the date of commencement of works. Bid deadline Sept. 29.

● **16200 — BRAZIL —** Tender for construction of a metallic bridge over the Bertioga Canal in the State of Sao Paulo. Project (Tender No. 01/BM/74) is financed with IBRD Special Fund assistance of $45 million. Bid deadline Oct. 11. Bid-letting authority: Rede Ferroviaria Federal S.A., Grupo de Trabalho do Banco Mundial Praca Duque de Caxias 86, Sala 506, Rio de Janeiro. Language of correspondence must be Portuguese.

● **16200 — PANAMA —** Tender for construction of civil works and supply and installation of equipment for new sugar mill at Pacora, east of Tocumen Airport in Panama Province, the first of three new mills planned by the Government of Panama, for which prequalification of bidders was advertised in April. Prequalification is a requisite. Plans and specifications are available from Corporation Azucarera la Victoria, Edificio Domino, Via Espana No. 235, Panama, upon deposit of $5,000 for the first set and $1,000 for additional sets. These deposits are reimbursable in part 45 days after bid opening. Bid deadline Oct. 7. Financing available under existing commercial credits, in part, and anticipated from export credit bank of supplier's country.

● **16200 — NIGERIA —** Tenders for following projects: 1) civil engineering works for 21 MW power station, 2) intake channel, and 3) irrigation and drainage system. Bid deadline Aug. 31. Bid-letting authority is Chad Basin Development Authority, P.M.B. 1130, Maiduguri, Nigeria, Attn: Asst. Gen. Mgr. (Engineering). Copies of a communication from the American Embassy in Lagos which provides additional information on these projects are available from Construction & Bldg. Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 * 202-967-3602, and the U.S. Dept. of Commerce District Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 * 415-556-5864.

● **16200 — VENEZUELA —** Siderurgica del Orinoco C.A. (SIDOR) invites companies to bid for design, manufacture, installation and supervision of initial operations of a direct reduction plant for iron ore, consisting of one or more modules, gas-fueled, capacity 3,200,000 metric tons/year of pre-reduced mineral with minimum iron content of 85 percent, and minimum metallization of 85 percent. To be erected at Ciudad Guayana, State of Bolivar. Interested firms should send authorized representative to SIDOR after Aug. 15 to present the following documentation: proof of experience in construction of one of more direct iron ore reduction plants with design capacity of at least 330,000 metric tons/year per module, presently in operation; proof that pre-reduced material obtained has a metallization of at least 85 percent; proof that construction of that plant has taken place during the last five years; proof that the plant utilized reformed natural gas as a reducing agent and as raw material, unprocessed iron ore and/or pellets; and proof that the company has experience in erecting steel plant installations abroad and that it has had full overall responsibility for design, manufacture, civil works, installation and start-up. Upon delivery of above documents, SIDOR will supply interested firms with bidding instructions.

Pulp mills, products

● **26100 — IRAN —** Iranian Tobacco Company requires 112,500 kilos of kraft paper in sheets of 35 X 50 cm., and 40,000 kilos of kraft paper in sheets of 40 X 42 cm. having substance of 60 grams/M2 + or — 3. Copy of tender containing specifications available from Construction and Forest Products Division, Room 2113, U.S. Department of Commerce, Washington, D.C. 20230, *202—967-3534. Bid deadline Aug. 26.

Agricultural chemicals

● **28700 — INDONESIA —** 460 metric tons of ground rock phosphate (36% P_2O_5), 360 metric tons of ammonium sulfate, 260 metric tons of urea, 180 metric tons of superphosphate, 200 metric tons of potassium chloride, 80 metric tons of kieserite fertilizer, and 20 metric tons of 12-12-17-1 compound fertilizer. If rock phosphate offered has a different P_2O_5 content, quantity

offered should be adjusted to provide the same 165.6 metric tons of P_2O_5 content. As alternatives, 570 metric tons of ammonium sulfate may be substituted for urea, and offers of other fertilizers containing the same total nutrient as the listed fertilizers will be considered. Tender No. AG/2/74, bid deadline Aug. 26. Bids should be submitted to North Sumatra Smallholder Development Project, P.O. Box 418, Medan, North Sumatra, Indonesia. Copies of documents available from Chemicals and Rubber Program, Materials Division, OBRA, BDC-458, U.S. Department of Commerce, Washington, D.C. 20230 *202-967-5497.

Plastic products

3079031 — AUSTRALIA — PVC or polyvinyl chloride clear film for domestic use in wrapping food, sealing jars & containers, etc. Requires approx. 40,000 lbs. per mo., 11-1/2 in. wide in rolls approx. 5,000 ft. per reel. Co. cuts & processes into smaller lots for sale through retailers. Requests information, c.i.f. prices. Must be approved for use with foods, have self cling characteristics, & gauge .0004 to .0005 in. Reply to — Mr. A. de Weers, Purchasing Mng., Chemos Industries Pty. Ltd., 18-22 Walsh St., Milton, Brisbane, Queensland, 4064. Telephone 072 — 361511.

3079831 — TRINIDAD — Bottle caps for bottling edible oil; internal dia. 33 mm. Co. has been using caps moulded in wf urea fitted with bk. stearan, or, vinylseal faced wood pulp inserts, but would consider similar fitting substitutes. Urgently requires initial order of 300,000-400,000 caps for delivery to port of Spain in Aug. Call, or write Anthony Chen, Purchasing Mgr., Coconut Growers' Assoc., LTD., P.O. Box 229, Port of Spain. Cable: Gograss. Tel: 62-35207.

Steel mill products

● **33100 — BURMA** —Various sizes and quantities of angle steel, channel steel, flat steel and stainless steel rods. Tender No. 26(T)P.I.C.(S)74-75/1509; bid deadline Aug. 21. Paper Industries Corp., Central Research Organization Bldg., Yankin P.O., Kanbe, Rangoon. Specifications available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202-967-2438.

● **33100 — BURMA** —Various sizes and quantities of mild steel pipe and stainless steel pipe. Tender No. 26(T)P.I.C. (S)74-75/1510; bid deadline Aug. 21. Paper Industries Corp., Central Research Organization Bldg., Yankin P.O., Kanbe, Rangoon. Specifications available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202-967-2438.

● **33100 — BURMA** —Various sizes and quantities of mild steel plates, sheets and rods. Tender No. 28 (T)P.I.C.(S)74-75 1511; bid deadline Aug. 21. Paper Industries Corp., Central Research Organization Bldg., Yankin P.O., Kanbe, Rangoon. Specifications available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202-967-2438.

● **33100 — IRAN** —190 tons chequered (ribbed) iron plate. Tender No. 761/53; bid deadline Sept. 16. Iranian State Railways, Tehran. Specifications available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202-967-2438.

Rolling, drawing, extruding of nonferrous metals

● **33500 — BURMA** — Supply of hard drawn high conductivity bare plain solid conductor. Tender No. 14(T)EL-EPC(T)/74-75; bid deadline Aug. 30. Office of the Deputy Director, Electric Power Corp., Rose Bank Road, Ahlone, Rangoon. Specifications available at above address at cost of 15 kyats plus postage charges of 10 kyats.

● **33500 — IRAN** — 41 items copper winding wire with synthetic resin enamelled for 120°C. Tender No. 534153; bid deadline Aug. 20. Iranian State Railways, Tehran. Specifications available from Copper, Lead and Zinc Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202-967-2438.

● **33500 — INDONESIA** — Following electrical distribution material and equipment is needed by the State electricity enterprise: L.V. cables and accessories, bare copper conductors, pilot and telephone cables and accessories, connectors and line accessories. Tender No. IDA. 334-IND/2; bid deadline Sept. 28. Perusahaan Umum Listrik Negara, Direktorat Pembangunan, Jalan Sunan Ngampel No. 1 (4th Floor), Kebayoran Baru, Jakarta. Tender documents available on loan from Copper, Lead and Zinc Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202—967-2438.

● **33500 — THAILAND** — Supply, install and test a 230-KV oil filled cable system consisting of two underground circuits including all associated equipment. About 52,000 meters single conductor cable required. Tender No. ADB-MEA-012; bid deadline Sept. 23. Purchases and Stores Department, Metropolitan Electricity Authority, 121 Chakpetch Road, Bangkok. Tender documents available from Copper, Lead and Zinc Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, *202—967-2438.

Fabricated structural metal products

● **34410 — NEW ZEALAND** — Supply and delivery of galvanized steel transmission line towers 110 Kv. and 220 Kv. (Tender No. 610). Bid call is for the purpose of establishing design for towers to specification and for supply of nominal quantities of these towers. Further towers may be required for delivery during 1975 and 1976, amounting to possible total of up to 13,000 tons, but construction of most lines for which towers would be required still subject to government approval. Provision will be made in contract for supply of additional towers. Tender financed by Government of New Zealand. Bid deadline Aug. 27. Small number of tender documents will be available from Construction and Bldg. Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 *202—967-3602. They also will be available for perusal at the New Zealand Embassy in Washington. Additional information is available from the Secretary, Tenders Committee, New Zealand Electricity Department, P.O. Box 12144, Wellington North, N.Z.

34495 — ITALY — Curtain walls, exclusively of type proved with sunshading metalwork. Preferably quote C.I.F. Genoa. Giuseppe Camillo Torretta, Import & Sales Mgr. Officine Giuseppe Torretta Di Torretta Eugenio Via Aosta, 22/24; 10152 Torino.

Fabricated wire products

34842-34891 — MOROCCO — Mounts, gun trailer, multiple, caliber 50, machine gun (military specifications no. 1005-673-4750) to be mounted on Jeep trucks (M-36-A2); quantity requested: 10 ea., rifles, 106 mm. R.C.L. to be mounted on Jeep vehicles (M-151-A2); quantity requested 20 ea. Reply to Mr. Victor Elbaz, Sodia, 84 Blvd. Lalla Yacout, Casablanca. Tel. 26.97.16; Cable: Autodis, Casablanca; Telex: GELCO 21060.

Fabricated metal products

3496971 — PANAMA — Wire clothes hangers, galvanized or otherwise resistant to oxidizing, for tropical use, caliber 12-1/2 and or 13 gauge wire. First order 900 cases or 450 thousand hangers. Prospect is well-estab. firm with wide range of business interests & activity, including 5 principal laundries in Panama City & Colon. As supply of hangers in country nearly exhausted, need is urgent. Order would be repeated every 4 months. Cable or call — Mario de Diego, Manager, Lavanderia Gambotti y Perez, S.A., P.O. Box 114, Panama 1. Cable: Gambotti Panama; Tel. 25-0693.

3499454 — UNITED KINGDOM — All metal ironing boards for domestic use; quantity of 5000 required initially. Reply to G. Tausz, Mng., Anglocentrop Ltd., 62 Oxford St., London WLA 4AB, Cable: Angcentrop London W1; Tel: 01-580-6288; Telex: 25160.

Farm machinery

● **35200 — TAIWAN** — The Procurement Department, Central Trust of China, 49 Wuchang St., Section 1, Taipei (104) Republic of China requests bids on following equipment: Complete machinery and equipment of a feed mill, including grain intake, meals intake, grinding, mixing, molasses and beef tallow admixing, premix, pelleting, packing, bulk outloading, dust extraction, steam raising, compressed air, electrics, weighbridge accessories and certain related equipment, tender including designing, furnishing and delivery, also technical services, training. Min. output 25 M/T per hour. Based on 24 hours operation. Product is for poultry and swine, raw material is maize. Bids limited to American and free European countries. Pls. quote on C & F whole lot basis valid for at least 60 days. Cable bids acceptable. Bid #GF 4-631722 with deadline Aug. 21.

35238 — GREECE — Diesel operated mobile to combine cut, screen, dehydrate & bale or pulverize alfalfa; mobile pto operated alfalfa driers; mobile alfalfa driers, electric motor operated; continuous flow type mobile alfalfa driers for field use; heated air, mobile alfalfa driers for field use. Professor Vlahos is Pres. of Greek Society for Livestock Reproduction & Artificial Insemination & is noted local authority on livestock improvement. As part of national drive for increased production, Vlahos will promote use of alfalfa field drying equip. to major cooperatives, farmers, & govt. & bank officials, with personal endorsement of machinery's effectiveness in preserving alfalfa nutrients. Requests replies ASAP. Reply to — Professor Constantinos Vlahos, Veterinary School, University of Thessaloniki, Thessaloniki. Tel. (031) 516-788, 516-789, 512-249.

Construction, mining, materials handling machinery, equipment

● **35300 — INDIA** — Accounts Officer, National Mineral Div. Corp. Ltd., 13 Camac Street, Calcutta 700-017, Bengal, requests quote on: Hydraulic excavators one cu. meter capacity, diesel driven crawler mounted. Bid #1-QMM/130/KB/95/74 with deadline of Oct. 11. Specs available from above address. Tender fee $1.50.

353313 — BOLIVIA —Petroleum drilling casings, urgent need. If by December a supply of casings is not received, drilling operations will be reduced. Presently drilling 70,000 meters & increase planned for 1975. Follow-on orders likely for 2 pipe lines; one of 650 kilometers (pipe 8" dia.); second of 700 kilometers (32" dia. pipe). Payment will be by LC. Quotations or requests for further information should be sent to below address. Quote either f.a.s. Port, f.o.b. vessel, C&F Buenos Aires. WTDR 7/73. Telex—Mr. German Borda, Yacimientos Petroliferos Fiscales Bolivianos, Y.P.F.B., Casilla 401, La Paz. Telex-ALL AMERICA CABLES 356,0006 or West Coast BX267.

Special industry machinery

3555569— JAMAICA —Machinery & equipment including parts, attachments, & accessories for producing bus tickets in rolls. Ticket size — approx. 1-1/4" x 2-1/4". Annual volume — 200 millions. Firm has client for one machine but also

seeks exclusive distributorship. Machine should be operable on 110/220 volt, 50 cycle. Buyer needs machine ASAP. Quote c.i.f. or f.o.b. Firm sells & services printing equip. & supplies locally, is aggressive, & well regarded by bankers & business community. 1973 sales $500,000; employs 12. Please reply as quickly as possible as firm anxious procure machinery but wishes to exhaust all possible U.S. sources before seeking a German supplier. Reply to Embassy of the United States, Attn: Commercial Section T050, 43 Duke St., Kingston.

3559498 — JAMAICA — Machinery to mfr. elastic to be used as trimmings in garment industry. Must be able to produce bands for brassiers & men's underwear. Specifications: must operate on 50/60 cycles; 220 volts. Requires brochures & prices to help work out final cost of capital equipment to submit to bank in order to obtain loan funds. Reply to — Mr. Barry Forrest, Volume One Ltd., 91A Old Hope Rd., Kingston 6.

Office, computing, accounting machines

● **35700 — INDIA** — Department of Electronics, Vigyan Bhavan Annexe, Maulana Azad Road, New Delhi, 110 011, has issued tender No. 14(16)74-ADM for supply, installation, and commissioning of a computer system. Bid deadline Oct. 1. Copies of tender announcement and specifications available only from Indian Supply Mission, 2536 Massachusetts Ave., N.W. Washington, D.C. 20008, for $13.75 (not refundable).

35700 — SRI LANKA — The Sri Lanka State Trading (Gen) Corp. P.O. Box 1686, 119 Wekande Road, Colombo 2, has issued tender No. 2 (AM) 74/9 for supply of accounting, bookkeeping, calculating and other business machines. Bid deadline Aug. 20. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202—967-2328.

35700 — VENEZUELA — The Minister of Communications is interested in hearing offers and suggestions for equipment used in mechanization and modernization of mail handling. Projects for a central post office with gradually increasing mechanization have existed for several years but have never been implemented. U.S. manufacturers of such equipment who have no agent in Venezuela should send literature to Director de Correos, Ministerio de Communicaciones, Esquina de Carmelitas, Caracas, Venezuela.

Electrical industrial apparatus

● **36200/36600 — INDIA** — The Director of Stores and Purchase, Oil and Natural Gas Commission, Tel Bhavan Dehra Dun, U.P. has issued tender No. IMP/GEOPHY/728/73 for supply of 12 nos. time break units time break unit (seismic source synchroniser) similar to series 200, input-output make, provided with: (a) coded command signals for remote firing of the blaster through radio and wire; 9b0 arrangement to receive up-hole as well as T.B. confirmation break; (c) 1500 volt blaster; (d) radio communication unit with a range of 25 miles; and (e) set of spare parts for two years operation. Bid deadline Sept. 10. Copies of tender announcement and specifications available from above address or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

Communications equipment

● **36600 — ALGERIA** — Monsieur le Directeur des Equipments des Telecommunications, Bureau des Marches 828, Ministere des Postes et des Telecommunications, 4, Blvd. Salah Bouakouir, Algiers. Cables: Gentel Alger, telex: 52020 has issued a tender for supply of 5,000 turnkey line-of-sight Hertian beam telephone connections between: (a) Algiers—Medea—Djelfa—Laghouat; (b) Constantine—Ain-Beida—Tebessa: (c) Ain-Beida—Khenchela; (d) Tiaret—Sougueur; and (e) Tizi-Ouzou—L'Arba-Nait-Iraten—Ain El-Hamman. Bid deadline Oct. 12. Offers must be c.i.f., in French, in five copies, to include guarantee two years, guarantee of availability of parts for 25 years. Offer for total tender requested; to remain valid 120 days past bid deadline. Correspondence in French required; all specs metric. Copies of tender announcement and specifications available from above address for $35.78 per copy, or on a loan from the Science & Electronics Div., Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

● **36000 — ITALY/NATO** — The Director, NATO SACLANT Research Centre, Viale San Bartolomeo 400, 19026 San Bartolomeo (La Spezia), Italy has issued tender No. A-2/17005/AA:MGC/14 for a digital controller for fast sonar processing. Bid deadline Oct. 10. Only firms certified by U.S. Dept. of Commerce are eligible to bid on NATO procurements. U.S. firms interested in certification should contact Science & Electronics Division, BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, * 202-967-2328. Copies of tender announcement and specifications available from above address or on a short-term basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, * 202-967-2328.

● **36600 — PERU** — Ing. Miguel Colina, Generente General, Empresa Nacional de Telecomunicaciones del Peru Entel Peru (Of. de Licitaciones y Concursos) av. Circunvalacion 1675, Lima 30, has issued tender No. 27-74 TC/Entel for supply of 2000 123 telephone switchboards for long distance operation, each with 2 positions. Bid deadline Aug. 21. Purchase financed by Entel Peru itself. Copies of tender announcement and specifications available from above address on a short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, * 202-967-2328.

● **36600 — THAILAND** — The Procurement Division, Telephone Organization of Thailand, Ploenchit Road, Bangkok, has issued tender No. TOT B-6 for the supply of 2000 dial type public telephone sets including spare parts. Bid deadline Oct. 2. Project financed by IBRD loan general fund. Full particulars obtainable at above address for $50 per set until Aug. 20. Copies of General Conditions only available on a short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

● **36600 — THAILAND** — The Procurement Division, Telephone Organization of Thailand, Ploenchit Rd., Bangkok has issued tender No. TOT B-5 to design, engineer, supply, deliver and install the following telephone switching equipment (provincial telephone plant project 1972'1976 phase): 1) Ban Bong 1000 local lines, 15 long distance; 2) Prachin Buri 600 local, 151 long distance; 3) LOP Buri 1000 local, 58 long distance; 4) Sattahip (I & II) 600 local, 12 long distance, plus 29 other exchanges with various capacities. Project finance by IBRD Loan. Copies of tender and specifications available only from above address for $100 per set.

● **3600 / — TRINIDAD** — The Chief Accountant Trinidad y Tobago Electricity Commission, P.O. Box 121, Port of Spain, has issued tender No. 2878 for supply of a PABX Telephone system. Initial capacity 400 extensions, 40 exchange lines, 5 tie lines, ultimate capacity 600 extensions, 50 exchange lines and 9 tie lines. Bid deadline Aug. 30. Copies of tender announcement and specifications available from General Accountant, Trinidad 7 Tobago Electricity Commission, 63 Frederick St., Port of Spain, Trinidad, W.I. or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

● **36600 — TRINIDAD** — The Trinidad y Tobago Telephone Co., Ltd., 54 Frederick St., Port of Spain, has issued a tender for supply of transmission equipment for upgrading and extending its toll network comprising 2300 channels and 19 microwave terminals. Bid deadline Sept. 30. Copies of tender announcement and specifications available only on central office equipment for $150 and transmission items for $100 from above address.

● **36600 — VENEZUELA** — The Oficina Ejecutora Proyecto USB-BID, Seccion Academica y de Equipamineto, Universidad Simon Bolivar, Baruta, Estado Miranda, has issued tender No. AE-1 (Bid Prestamo 354 SF-VE) for supply of high tension laboratory equipment for teaching purposes, consisting of alternating current cascade, pulse generator, metering sphere trigger, mounting of continuous current multiplier. Bid deadline Sept. 13. Copies of tender announcement and specifications available only from above address.

● **36600 — VENEZUELA** — The Departamento de Transmision, Gerencia de Desarrollo, Piso 17, Edificio Administrativo Cantv, Avenida Liberator, Caracas, has issued tender No. CANTV LD-27 for supply and installation within 18 months of microwave communications equipment of 1800 channels in the 6 GHZ band and 1800 channels in the 11 GHZ band. Equipment to be installed in Northwestern Venezuela. Copies of tender announcement and specifications available only from above address for $116.28 per copy.

● **36600 — INDIA** — The Assistant Director General, Imports, Room 514, P&T Directorate, New Delhi, India has issued tender No. 12-110/74/MMD for supply of a disc type magnetic recorder, T.T. block of automatic accounting, STD coin box, auto telephone instrument, sound volume meter, call simulator, and a pulse train generator. Bid deadline Oct. 3. Copies of tender announcement and specifications available only from Accounts Officer (C&A), Office of the Director General, Posts and Telegraphs, New Delhi 110 001 for $2.74 per copy. Tender to be financed out of World Bank Loan.

● **36600 — TURKEY** — The TRT Kurumu Genel Mudurlugu (Turkish Radio-Television Association), Genel Evrak Mudurlugu, Mithatpasa Caddesi 37, Ankara, has issued a tender for TV broadcast cars. Two each for operation at standstill. Bus-loke carrier vehicles, equipped with complete scope of equipment for outside broadcasts by 625-line, monochrome CCIR system B standards; including inter-alia: four each three inches or 4. 1/2 inches image orthicon cameras, signalization system, audio and video program and monitor equipment, communication equipment, antennas, etc. One each for mobile operation: equipped with two plumbicon cameras and audio-video control console. Bid deadline Aug. 27. Prices in terms of f.o.b. Istanbul. Delivery period to be quoted in tenders. Option 4 months. Payment: 20 percent advance payment, 70 percent through L/C against shipping documents, 10 percent after final acceptance. Copies of tender announcement and specs from Modern Translation Bureau, Karanfil Sokak 49/2, Yenisehri, Ankara, for $27.

● **36600 — ALGERIA** — Sous-Direction des Finances et de l-Equipment, Bureau des Marches et des Subsistances, Direction Generale de la Surete Nationale, Villa Dar-El-Nador Chemin Gadouche Abdelkader (Ex la Madeleine) Hydra, Algiers, has issued tender No. 14-74 for 50 VHF simplex and duplex transmitter-receivers to equip mobile or fixed stations for microwave connections. Bid deadline Sept. 5. Offers to be c.i.f., in six copies, to include technical literature for each item, guarantee one year, and remain valid 90 days past bid deadline. Correspondence and offers in French required; all specs metric. Copies of tender announcement and specifications available on short-term loan basis

to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

• **36600 — COLOMBIA** — Dr. Benjamin Cubillos, JEFE Seccion de Suministros, Empresa Nacional de Telecommunicaciones, Telecom Calle 23 No. 13-49, Piso 6, Bogota, has issued tender No. BIRF IIIA04 for supply of 900 coin operated telephones dial type. Bid deadline Aug. 21. This purchase financed by World Bank. Specifications available at above address for $120 for the first copy and $60 for each additional copy, not refundable.

• **36600 — COLOMBIA** — Dr. Benjamin Cubillow, JEFE Seccion de Suministros, Empresa Nacional de telecommunicaciones, Telecom Calle 23 — No. 13-49, Piso 6, Bogota, has issued tender No. BIRF — III-03 for supply of 18,000 automatic telephones, dial type. Bid deadline Aug. 21. This purchase of addition equipment by the Parastatal National Telecommunications Company is financed by the World Bank. Copies of tender announcement and specifications available only from the above address for $120 first copy, $60 for additional copies, not refundable.

• **36600 — COLOMBIA** — Benjamin Cubillos, JEFE Seccion de Suministros, Empresa Nacional de telecommunicaciones, Telecom Calle 23 No. 13-49, Piso 6, Bogota, has issued tender No. BIRF III-02 for supply of 42 telephone exchanges for local and long distance service. Bid deadline Sept. 25. This is an expansion project of the Parastatal National Telecommunications Company, financed by World Bank. Copies of tender announcement and specifications available only from above address for $400 for the first copy and $200 for additional copy, not refundable.

• **36600 — GUINEA** — The Direction General des Telecommunications, Secretariat d'Etat Aux Postes et Telecommunications, Conakry, has issued tender No. RAF 231/1-2 PNUD for the expansion and modification of telecommunications system. Bid deadline Oct. 1. Correspondence in French necessary. Project financed by $4 million loan from African Development Bank. Copies of tender announcement and specifications available only from above address for $122.15 per copy.

• **36600 — INDIA** — K. Veeraraghavan, Joint Director Railway Electrification (ETORES) Railroad Board, Rail Bhavan (Room NBR 114), Raisina Road, New Delhi 110001, has issued tender No. RE(S)/5 of 1974 for detectors earth leakage (110v 50 c/s ac) for signal light circuits in 25 kv ac electric traction areas. These should be capable of monitoring the earth faults in cables and have facilities of automatic warning indications. Quantity required 86 sets. Bid deadline Sept. 2. Copies of tender announcement and specifications available from India Supply Mission, 2536 Massachusetts Ave., Washington, D.C. 20008 for $2.70 per copy, or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

• **36600 — AFGHANISTAN** — Radio Afghanistan, P.O. Box 544, Kabul, attention: Engineer A.K. Attaie, President, has issued a tender for supply of mobile radio transmitters, medium or shortwave 10 to 20 kw. Buyer wants price quotations for both types of transmitters, c.i.f. Karachi, insurance to Kabul, and also estimated delivery time. Bid deadline not indicated.

• **36600 — BURMA** — The Managing Director, Burma Railways Corporation, Bogyoke Aung San St., Rangoon has issued tender No. BRC/IDA/14(T) 11 (EGE 74-75) for one set of control telephone equipment, with SSB radion equipment for dispatching trains at 50 wayside stations. This procurement will be financed by ODA credit. Bid deadline Aug. 19. Copies of tender announcement and specifications available from American Embassy, 581 Merchant St., Rangoon for $3.23 per set, or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230,*202—967-2328.

• **36600 — INDIA** — The Directorate General, Supplies and Disposals, Jeevantara Bldg., Parliament St., New Delhi, 110 001 has issued tender No. ES-5/210/35/009/CELL-59 for supply of UHF and VHF TV equipment and test equipment. Bid deadline Aug. 13. Copies of tender announcement and specifications available from Indian Supply Mission, 2536 Massachusetts Ave., N.W., Washington, D.C. 20008 for $2.75 (not refundable).

UNDP Assistance Is Requested In 50 Big Preinvestment Projects

Twenty-eight developing countries and regions have submitted 50 preliminary requests for financial and technological assistance from the United Nations Development Program (UNDP). These requests have not been funded nor have executing agencies been designated to implement them. They are made available to U.S. firms as potential projects on which future bid proposals may be requested, or as indications of the industrial and social plans of the requesting countries. U.S. firms are cautioned that these projects may not be approved.

Interested U.S. firms may obtain individual summaries of these projects from the Export Information Division, Office of Export Development, Rm. 2310, Attn: J.L. Malone, U.S. Department of Commerce, Washington, D. C. 20230. Please include a pre-addressed label with your request, and identify each project desired by project number, country and title.

BGD/72/013 — BANGLADESH — For strengthening statistical services.

BGD/72/021 — BANGLADESH — For Bangladesh civil aviation training center.

BUL/72/055—BULGARIA— Establishment of a research and experimental station for biological testing of mixed feed—Kostinbrod.

BUR/73/006—BURMA—Artificial insemination development expert.

BUR/73/015—BURMA—Offshore tin exploration.

BUR/73/016—BURMA—Expansion of research facilities and training of refinery personnel.

ECU/74/004— ECUADOR — Operational planning.

ECU/74/005—ECUADOR—National regional planning.

EGY/73/029—EGYPT—Electronic industries research and development center (EIRDC), Cairo (Phase I).

FIJ/73/004—FIJI—Regional planning project.

FIJ/73/003—FIJI—Vocational training and home industries.

ICE/73/001—ICELAND—Development of salmon and trout resources.

IND/72/047—INDIA—Advanced technology in semiconductor devices at Central Electronics Engineering Research Institute, Pilani, Rajasthan.

IND/72/054—INDIA—Strengthening of central power research institute, Bangalore and Bhopal.

IND/73/012—INDIA—Exploration and identification of alternative raw materials for paper and newsprint manufacture.

IND/73/026—INDIA—National staff college of educational planners and administrators, New Delhi.

IND/74/021—INDIA—Development of coastal engineering at the Kerala Engineering Research Institute, Peechi.

IRA/73/015—IRAN—Coordination of water resources development.

IRA/73/043—IRAN—Management training and institutional services (MANTIS).

IRQ/73/016—IRAQ—Rural water supply program (Phase II).

ISR/73/029—ISRAEL—Establishment of institute of telecommunications, Tel Aviv.

JOR/73/007—JORDAN—Establishment of telecommunications training center.

MAT/74/006—MALTA—Industrial management advisers.

MOR/69/530—MOROCCO—Water supply studies (Phase II).

MOR/72/013—MOROCCO—Development of environmental health services, Rabat.

OMA/73/002—OMAN—Assistance to the directorate of national telecommunication (supplementary assistance).

OMA/73/016—OMAN—Educational planning and development (Phase 1).

PAR/73/002—PARAGUAY—Teacher training.

PER/72/006—PERU—National institute for educational investigation and development (INIDE).

PER/74/005—PERU—Assistance to development of the pulp and paper industry.

ROK/72/009—REPUBLIC OF KOREA—Food processing center, Seoul.

ROK/72/021—REPUBLIC OF KOREA—Hotel and catering training center.

ROK/72/008—REPUBLIC OF KOREA—Central vocational training institute (CVTI) (Phase II).

ROK/72/025—REPUBLIC OF KOREA—Strengthening of Korean design and packaging center.

ROK/72/027—REPUBLIC OF KOREA—Korea ocean research and development institute (KORDI).

ROK/72/028—REPUBLIC OF KOREA—Airborne geophysical and ground follow-up survey of selected areas in Southern Korea.

RVN/73/020—REPUBLIC OF VIETNAM—Malaria control program.

SOM/73/004—SOMALIA—Technical assistance for foundry and mechanical workshop.

SOM/73/007—SOMALIA—Civil aviation training center, Mogadiscio.

SRL/74/008—SRI LANKA—Strengthening plant protection services, Peradeniya.

VEN/72/019—VENEZUELA—National plan ning of forestry development and industrial promotion of lesser known forest species in Venezuelan Guiana.

WES/72/007—WESTERN SOMOA—Strengthening of department of agriculture.

RAF/73/002—REGIONAL (AFRICA)—Multilateral trade and related monetary negotiations.

REM/71/292—REGIONAL (EUROPE, MEDITERRANEAN AND THE MIDDLE EAST)—Economic integration and trade expansion among member countries of the Council of Arab Economic Unity (CAEU).

RLA/71/310—REGIONAL (LATIN AMERICA)—Education and training of allied health (para-medical) personnel in the Commonwealth Caribbean.

RLA/72/078—REGIONAL (LATIN AMERICA)—In-plant training program for personnel engaged in industrial research.

RLA/72/102—REGIONAL (LATIN AMERICA)—Civil aviation training institute.

RLA/73/011—REGIONAL (LATIN AMERICA)—Civil aviation regional training center.

RLA/73/023—REGIONAL— Strengthening field advisory services of the Pan American food-and-mouth disease center.

RLA/73/053—REGIONAL—Export market development program.

● **36600 — SINGAPORE** — The Assistant Registrar (A), NGEE ANN Technical College, 535 Clementi Rd., Singapore 21 has issued tender NE/ADB/2B/73 for supply of teaching equipment to laboratories and workshops for the Department of Mechanical Engineering. Bid deadline August 17. This project is financed by the Asian Development Bank. Copies of tender documents may be obtained on payment of $5 (US$1 equals approx. S$2.43) from above address.

● **36600 — SUDAN** — The Cosmos Enterprises (Sudan) Ltd. P.O. Box 842, Khartoum, desires responses from firms for supply of 3 weapon detectors, door frame magnetometer, free standing type, to operate on 220 volts, for passenger checking. Quotations should be c.i.f. Khartoum Airport, and include installation, training if required, and remuneration of persons who will install and act as trainees. Suppliers should also specify delivery date (immediate delivery strongly desired). Responses desired before Aug. 15.

● **36620 — ECUADOR** — Ing. Hernan Castaneda M., Gerente General, Instituto Ecuatoriano de Telecomunicaciones (IETEL) San Gregoria 120, Quito, Ecuador has issued a tender for a new microwave system valued at $4 million. The system will have a capacity of 960 telephonic channels, 3 radio frequency channels, 1 telephone channel, 1 color TV channel, and one reserve channel. The call for bids, which has not yet been published, will include equipment, installation, turnkey operation, and testing and maintenance services. Interested firms should notify IETEL now. Communications in Spanish preferable.

36622 — CHILE — Television broadcast equip. & closed circuit system. Est. cost $85,000, partially financed by IDB credit. University interested in quotations for equip. to include: two mobile cameras, similar to model 2700L Sarkes-Tarsian, or equal, two plumbicon P/ITEM I:CCTV-III, one zoomar-motorized lens Mark XB, or equal, one wave monitor similar to Tektronic RM529, or equal, plus amplifier, switches, connectors, cables; synchronization equip., to include one generator similar to Telemation model 2.200, or equal, frame distribution, power source amplifiers, connector & terminals; video equip. tapes, console, video-tape, reproducer similar to Ampex 7900-03, or equal, 110V, 50 Cps.; complete audio visual system, adapted motor vehicle, portable lighting similar to Kliegl, type 25 AO, or equal. Maintenance equip. & $5,000 in parts & accessories. Immediate response needed due to IDB deadline. Contact buyer—Edith Alman, Departamento Techologia Educativa URC, Universidad Catolica de Chile, Alameda 340, Santiago.

Motor vehicles and equipment

● **37100 — INDIA** — Supply of 120 ton diesel tractor trailer. Tender No. IDA/KSEB/7/74-75. Bid deadline Sept. 3. Financing by IDA loan. Bid documents available from Chief Engineers, Electricity (General) Purchase Section, Karnatka State Elect. Board, C.B.A.B. Complex, Mysore Bank Square, Bangalore 560 009. Tender document request to be accompanied by demand draft for $13.75 drawn on any scheduled Indian Bank in favor of: Chief Engineer, Electricity (Gen.) Karnatka State Electricity Board.

Railroad equipment

● **37400 — IRAN** — Supply of various parts for railway freight cars including 200 wheel sets and 5000 steel tires. Tender No. 194, 196, 197, 198, 396/53. Bid deadline Aug. 24. Tender documents available from Iranian Economic Mission, 5530 Wisconsin Ave., N.W., Washington, D.C. 20015, telephone 301-654-7930. Copy of tender documents available for inspection in Transportation and Capital Equipment Division, BDC, Room 1128 Main Bldg., U.S. Department of Commerce, Washington, D.C. 20230.

Engineering, laboratory, scientific, research instruments

● **38100 — ALGERIA** — The Ministere de l'Enseignement Superieur et de la Recherche Scientifique, 1, rue Bachir Attar, Algiers, has issued a tender for assorted equipment for breeding animals for experiments at the Algiers Scientific and Technical University. Bid deadline Sept. 1. Copies of tender announcement and specifications available from above address. Correspondence and offers in French required. Copies of tender documents, in French, available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

Instruments for measurement, control and analysis

● **38200 — BELGIUM/NATO** — The Purchasing and Contracting Office, Supply Branch, IHSC SHAPE, 7010 Belgium, has issued tender No. IFB 84-02 PS/CIB for supply of: one each wideband true RMS voltmeter (10 MHZ); six each oscilloscope, dual trace; one each level meter; one each broadband coaxial frequency meter; one each communications spectrum analyser; one each HF/VHF radio test set; 14 each spectrum analysers; 91 each digital multimeters; seven each pocket size multimeters; seven each oscilloscope calibrators; seven each distortion analyser; seven each surface temperature indicator. Bid deadline Aug. 23. Only firms certified by U.S. Dept. of Commerce are eligible to bid on NATO procurement. U.S. firms interested in certification should contact Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328. Copies of tender announcement and specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div.

● **38200 — INDIA** — Mr. K. R. Pandit, Chief Engineer, The Tata Power Co., Ltd., Tata Vidyut Karyalaya Murzban Rd., Bombay 400 001, has issued tender No. IDA/TATA/5 for supply of testing instruments in electric power transmission and distribution project. Bid deadline Sept. 15. Copies of tender announcement and specifications available from the above address for $13.33 per copy or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, * 202-967-2328.

Surgical, medical, dental instruments

● **38400 — IRAQ** — The Ministry of Health, Foreign Purchasing Committee, Baghdad, cable address: "Forhealth" Baghdad, has issued tender No. 14/74 for supply of 100 anesthetic machines. Bid deadline Aug. 12. Copies of tender announcement and specifications available from above address or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-867-2328.

● **38400 — IRAQ** — The Foreign Purchasing Committee, Ministry of Health, Cable address: "Forhealth" Baghdad, has issued tender No. 16/74 for supply of dental units. Bid deadline Aug. 19. Copies of tender announcement and specifications available from above address or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

● **38400 — NIGERIA** — The Specialist Hospital Action Committee, c/o Economic Planning and Political Division, Military Governor's Office, Maiduguri, has requested applications from interested firms for supply of hospital equipment. Applications should provide following information: a) countries where most of the equipment will originate, b) location of parent company, c) experience in supplying equipment in Nigeria and abroad, d) facilities in Nigeria for maintenance and servicing of equipment supplied; e) approximate financial volume of equipment supplied per annum in Nigeria and abroad, and f) type of equipment they are most interested in supplying. Application should be sent to attention of the coordinator at above address.

● **38400 — GREECE** — The Institute of Social Insurance (IKA) Section of Foreign Supplies, 8 Aghiou Constantinou St., Athens, has issued tender No. 14/74 for supply of surgical instruments. Bid deadline Aug. 19. Purchase financed from IKA's budget. Copies of tender announcement and specifications available from above address free of charge or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C., *202-967-2328.

Photographic equipment

● **38600 — GREECE** — The Institute of Social Insurance (IKA), Directorate of Supplies, 8 Aghiou Constantinou St., Athens, has issued tender No. 15/74 for supply of 80,000 litres, X-ray film developing chemical and 120,000 litres X-ray film fixing chemical. Bid deadline Aug. 13. Copies of tender announcement and specifications available from above address free of charge or on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC, Room 1003, U.S. Dept. of Commerce, Washington, D.C. 20230, *202-967-2328.

Miscellaneous durable goods

50930 — TAIWAN — Scrap motors, annual requirement 200 M/T. Used car tires, with nylon, rayon, polyester belt only, 825-20-14P, 900-20-14P, 1000-20-14P, 1100-20-14P, 200 M/T. Reply to — Mr. C. L. Chang, Mgr., Shen Ping Trading Co., Ltd., 2-1, Lane 306, Tai Lin Road, Sec. 2, Taishan Hsiang, Taipei Hsien (243), Cable Shenpingco.

50930 — TAIWAN — Scrap steel & scrap copper, annual requirement 500 M/T each. Reply to — Mr. B.H. Sun, Gen. Mgr., Double Happy Trading Co., Ltd., P.O. Box 1598, Taipei. Cable Double. Direct sales, agency & distributorship.

50930 — TAIWAN — Scrap steel, No. 1, No. 2 HMS, ISIS, 10,000 m/t/mo. Scrap automobile engines (motor block), ISIS, 10,000 m/t/mo. Used hp motors, 100 m/t/mo. Please offer C&F prices. Reply to Mr. Da-li Tao, Gen. Mgr., Mao Shing Enterprises Co., Ltd., 3rd Floor, 56-5 Chien kuo North Road, Taipei (104). Cable Maoshing; tel 574930.

Computer, data processing

73700 — ECUADOR — Col. Fernando Dobronsky, Gerente General, Instituto Ecuatoriana de Seguridad Social (IESS), Avenida 10 de Agosto y Bogota, Quito, has issued a tender for offers from consultant firms to assist IESS in remodernizing operations and tying regional offices into its computer system. IESS is currently utilizing an IBM computer. Tender available from above address.

Motion picture output, distribution

78140 — JAPAN — Pre-recorded cassette type video tapes. Interested in both educational and drama pictures. Estimated annual sales: $10,000 initially. Buyer offers training courses for secretaries, staff members of overseas divisions and junior executives of major companies in Osaka and Tokyo areas. Recently branched out into the distribution of educational materials. Sees bright future for sale of American cassette type video tapes among junior executives interested in learning English. Intends to sell the tapes through major department stores and by door to door sales. Reply to — Mr. Osamu Mukai, Mgr., Business Dept., Inter Osaka Corp., Shohaku Bldg., 28 Turuno Cho, Kita Ku, Osaka 530.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Paper mills

2621760 — JAPAN — Paper mills—unbleached kraft liner for external use. Reply to—Mr. Keiichi Iwamoto, Exec. Dir., Hokyyo Koeki K.K., Kyodo Bldg., 10 Nihonbashi Muromachi I-Chome, Chuo-Ku, Tokyo 103. Cable: Hokkokoeki, Tel.: 03-242-5841. Excl. Distributorship.

Paperboard mills, products

2631820-2823198—SOUTH AFRICA — Leatherboard & cellulose fiberboard for shoe & bag trade. Reply to—Mr. A. A. Pearce, Mng. Dir., The S.A. Mercantile Co. Ltd., P.O. Box 41, Observatory, Cape Province 7935. Cable Cantyle; Tel 55-1525.

Periodicals: publishing, publishing & printing

2721307-2721317— SWEDEN— Scientific periodicals. Reply to—Mr. Per Hammarkrantz, Mgr., European Abstracts Service, Box 12035, S-402 41 Goteborg 12.

Rolling, drawing, extruding of nonferrous metals

3356943 — AUSTRALIA — Magnesium in ingot form for pressure diecasting. Urgent requirement—purchase as required. Est. Quantity: 50-100 Met/annum. Reply to: Mr. G. McArthur, Mgr., Hadn and Kolb (Aust) Pty Ltd., P.O. Box 245, Oakliegh, 3166, Victoria. Telex: AA26205 Phone: 544-9444. Cable: Hahnkolb.

Farm machinery

35249 — JAPAN — (Lawn mower parts). Blades for self-powered reel-type gang mowers. Five or six blades to each rotary roller unit. Above six in. in dia. and 18 to 20 in. in width. In quantity, for re-sale to mfg. of self-powered reel mowers. Any price range. WTDR 1/74. Mr. Mas Yasu, Pres., Maple Trading Co. Ltd., Maruzen Bldg., Suite 201, 3-12 3-Chome Kumade, Yahata-Ku, Kitakyushu.

Construction, mining, materials handling machinery, equipment

3534012 — PORTUGAL — Mobile telescoping hydraulic work platforms (cherry pickers). Reply to—Mr. Charles A.D. Lindley, Mgr., Ahlers Lindley, Lda., 33-2, Rua Do Ferregial, Lisbon 2.

Special industry machinery

3551198 — SWEDEN — Milkshake machines. According to local bank information, co. is one of largest in its field in Sweden. Reply to—Mr. Pehr Logander, Ring Bingo AB, Box 381, S-651 06 Karlstad 1.

General industrial machinery

35631 — EGYPT — Electrically driven air compressors ea. rated 5,000 cu. ft/min. of free air at pressure of 25 psi. & temperature not exceeding 90C° with inlet air condition of 20 C° & 80 percent relative humidity. Seeks representation arrangement. Annual sales potential this opportunity exceeds $45 million. Reply to International Corp. for Commercial Representation, 33 Kasr El Nil St., P.O. Box 1025, Cairo.

Electrical industrial apparatus

3629398 — JAPAN — Electrically powered micro-soldering machine (100 volts, 60 cycles) capable of soldering multiple wiring connections simultaneously. Buyer unable provide more precise product description or price range. Product literature & price quotations desired. Reply to—Mr. Shiro Hayashi, Pres., Pan Japan Trading Co., Ltd., 5-20 Kumamoto 3-Chome, Kokura-Ku, Kitakyushu 802. Tel. (093) 941-5391. Exclusive Agency.

Household appliances

363xx — CANADA — Complete line of household electric ovens & ranges, including oven-range hoods & fans; complete line of household electric dishwashers; complete line of household automatic & semi-automatic washing machines, electric dryers, & washer-dryer combinations. Can only carry 2 additional lines for coming year. Imperative to have prompt response so that samples can be on floor by late Aug. in order to cash in on big retail market this fall. Will only deal directly with U.S.-owned companies mfg. in U.S. Willing to make trip to interested U.S. firms. Telephone or write—Mr. Gerald R. Kendall, Dir. of Marketing, Amana (Quebec) Ltd., 9025 Park Ave., Montreal, Quebec H2N 1Z1. Telephone 514-381-3313. Seeks exclusive Canada-wide distributorship.

Instruments for measurement, control and analysis

3821318 — FRANCE — Acoustic leak detectors used to detect leaks of underground pipe. Reply to Jean-Claude Hemery, Dir. Technique, Bureau European De Detection Et D'Applications Topographiques (BEDAT), 71 Rue Mirabeau, 92-Antony. Tel.: 237 21-45.

Scrap & waste materials

50930 — TAIWAN — Old ships for dismantling; scrap steel, iron and non-ferrous metal. Reply to—Mr. Mark Chen, Representative, Myer & Myer Ltd., Liaison Office, P.O. Box 58486, Taipei. Cable Markchen: Tel: 727717; Telex 11182 Coldenmark.

Special product groups

9950012/9921103/9921104/9921105/9921199 — SWITZERLAND — Director of medium-to-large manufacturing and distributing company specializing in mass merchandising of consumer goods, cosmetics, household preparations, drugs will assist U.S. companies seeking to export or to expand their activities to W. Europe, in particular Switzerland, Germany, Austria in management, marketing, merger, takeover, licensing or other corporate matters. Eggimann is vice-chairman Eggimann group of companies, Thalwil. Employs 140. Bank Ref: Swiss Credit Bank, Union Bank of Switz, 8021 Zurich. Reply to Walter P. Eggimann, Seestr. 135, 8800 Thalwil, Cable Walter Eggimann Thalwil, Tel. 01/720 48 39, Telex 55252.

Paper Products, Pencils On Iraqi Shopping List

A wide range of paper products and several million lead pencils are sought by Mr. Hassani, Import Manager, State Company for Importation & Distribution of Precision Instruments, P.O. Box 5674, Baghdad, Iraq, Cable AJDAK BAGHDAD, on behalf of Iraq's Ministry of Education. He also has an almost unlimited need for surgical and medical equipment for the Health Ministry. His current budget is $27 million, and he also procures for other ministries and departments on a much larger scale. Mr. Hassani prefers to do business on basis of samples received where possible, e.g., fountain pens, or by catalogs. He would welcome receiving comprehensive selection of catalogs from U.S. suppliers. A list of the equipment required (large and small) is available from the U.S. Department of Commerce, Trade Opportunities Program, Rm 1322, Washington, D.C. 20230.

Poland Seeks Equipment For Record, Tape Plant

Polskie Nagrania, the Polish State Enterprise for Artistic Recording, is seeking technology and equipment for the production of phonographic records and casette tapes, including specific equipment required for sound recording and technical processing, electro forming, dry blend (powdered vinyl) production, record pressing, packaging and warehousing and shipping.

Complete specifications for the plant will be supplied to interested firms by: POLIMEX-CEKOP, Czackiego 7/9, P. O. Box 815, Warszawa, Poland. Bid deadline is September.

Interested firms are also advised to contact the Bureau of East-West Trade, Trade Development Assistance Division, for additional information concerning Polish plans for expanded production in the recording industry.

Mali Wants Well Digger

Mali needs a rotary (air and mud suction) well digger capable of exploratory bores 4"-6" and 8"-12", to a depth of 300 to 600 meters. It is to be mounted on a 4-wheel drive vehicle capable of maneuvering in desert stretches on variable terrain. Material is to include standard spare parts assortment and required accessories for the well digger and vehicle. Interested firms should send their offers, including estimated delivery date and prices c.i.f. to Bamako, to: M. le Directeur de l'Hydraulique, P.O. Box 66, Bamako, Mali. Cable offers to Cable Hydraulique, Bamako, Mali.

Visiting Buyers And Officials

AUSTRALIA—Viktor Kastan Kasmar & Co., 29 Centenary St., Seaford, Victoria 3198. Deals with yarns for knitting and weaving and also textiles. Has plants for knitting, weaving, finishing and spinning. Interested in technical information and importing raw materials, yarns, and machinery. Expected to arrive in New York beginning of August for a 3-4 week stay; c/o Mr. B. Martens, 3148 Decatur Ave., Bronx, New York 10467. Mr. Kastan plans to visit the Los Angeles area. WTDR-NA.

NETHERLANDS—Siderius van Manen, establishing his own company after several years of senior positions with U.S. companies. Interested in representing U.S. manufacturers of electronic products and instruments in the Benelux. Expected to arrive in Vergennes, Vermont during the second week of August for a four-week visit; P.O. Box 98, Vergennes Vermont 05491. Mr. van Manen plans to travel mainly in New England area but is willing to travel further if called for. WTDR-None.

ISRAEL—Shoshana Feuerlicht, Papko Factory Ltd., Chomer Umigdal 26, Tel Aviv. Interested in purchase of soft toys as well as acquiring technical information for production procedure. Miss Feuerlicht is expected to arrive in New York on the first of September and plans to stay one month; c/o L. Langzam, 172 E. 4th St., New York, N.Y. 10009. Tel: 228-3943. She plans to visit Wisconsin and New York. WTDR-None.

BANGLADESH—Muhammad Abdul Jabbar, Nabarun Agencies, 3/3c Purana Paltan Dacca-2. Interested in U.S. agency franchise for pumps and scientific instruments and exporting Bangladesh products. Expected to arrive in New York on Sept. 14 for a three-month stay; c/o Colt Industries Inc., 430 Park Avenue, New York, N.Y. 10022. Mr. Jabbar plans to visit New York and Washington. WTDR-5/74.

Future Construction Abroad

ITALY — CIPE, the Italian Interministerial Programming Committee, approved a project for the construction at Gioia Tauro (Calabria), by ITALSIDER, Via Corsica 4, 16218 Genoa (a company controlled by the Italian Government), of Italy's fifth **steel center.** Total cost is estimated at $907 million (1972 prices). In the first stage, a cold-rolling mill with capacity of one million metric tons annually will take approx. two years to complete. In the second stage, taking two more years, the center will be equipped with a three-million-ton-a-year hot rolling mill as well as electric furnaces to produce 500,000 metric tons of steel annually by processing iron ore. Construction will begin in 1976 at which time the government is expected to have completed basic infrastructures, including a new port and pier for unloading of heavy machinery. Design of the center has been entrusted to ITALIMPIANTI, Piazza Piccapietra 9, 16121 Genoa (an engineering company owned by FINSIDER). This project offers substantial potential for U.S. exports of special machinery and parts, components and instrumentation. U.S. firms interested in selling such equipment should communicate with Vulcan Trade Co., 100 Wall St., New York, N.Y. 10005, a company owned by FINSIDER responsible for procurement in the U.S.

GREECE—Peter Tsebelis, General Manager, NAFSI SA, 34 Methonis St., Piraeus 24, a medium-size ship repair yard and propeller manufacturer and repairer, is interested in purchasing a **second-hand floating dock** for requirements of NAFSI Yard. Should have a docking capacity of 15,000-20,000 DWT and be equipped with two 3-5 ton cranes, and compressed air, power supply, fire fighting and other systems. Purchase comes under NAFSI's expansion program, which includes establishment of new facilities for valve and piston reconditioning and addition of new machine shop equipment. Interested U.S. firms should contact Mr. Tsebelis as soon as possible.

JAMAICA—In an effort to get its import-substitution program into gear, the Government of Jamaica through the Jamaica Industrial Development Corp. (JIDC) has launched plans for a **wide range of agro-industrial projects.** These include a milk processing plant at Montpelier near Montego Bay, a banana (raisins) factory at Port Maria, St. Maria, a soybean processing plant at Bodles in St. Catherine, revival of a vegetable processing factory at Bull Savannah, St. Elizabeth, establishment of a cassava factory in St. Elizabeth, and three meat processing plants. A report from the American Embassy in Kingston giving brief descriptions of each project with contacts is available from the U.S. Department of Commerce, Trade Opportunities Program, Rm. 1322, Washington, D. C. 20230.

JAMAICA—Further development plans have been announced for the **Negril Development Area.** Besides construction of a hotel, shopping center, townhouses, and a complex of apartments, another $1 million development is to be constructed on the beach close to the shopping center. Among the other developments planned are: a $600,000 vacation colony of cottages and condominiums to be named "Sunset Point"; a townhouse complex estimated to cost over $900,000; a 10-bedroom hotel, $180,000, and cottages at Crystal Waters, $150,000. Approval has also been given for construction of several individual cottages and duplexes all estimated to cost some $600,000. Other projects are construction of a marina and boat and fishermen's facilities. Contact: National Hotels & Properties Ltd., 32 1/2 Duke St., Kingston. Tel: 932-1965.

ECUADOR—The Social Security Institute is preparing bid documents and specifications for the **Guapan Cement Mill.** Firms interested in Dobronsky, Gerente General, Instituto bidding should contact Col. Fernando Ecuatoriano De Seguridad Social (IESS), Avenida 10 De Agosto Y Bogota, Quito.

CAMEROON—The World Bank and the World Health Organization have carried out a detailed study of **water and sewerage needs** in Cameroon. The government's priorities favor water-borne sewerage and storm drainage projects in the cities of Yaounde, Douala, Maroua and Victoria, but it will be necessary to review the IBRD-WHO study before any final decisions can be made. The Ministry of Mines and Power will ultimately be responsible for drawing up technical specifications. The official in charge is: M. Job Komguem, Chef de Service de l'Eau et de l'Assainissement, Ministere des Mines et de l'Energie, Boite Postale 1576, Yaounde.

CAMEROON—The Ministry of National Education has announced the government's program for extending **rural education and training facilities.** IRAM, a French consulting organization, is presently drawing up a feasibility study which will be the basis for the government's presentation to the World Bank for financing. Main emphasis is training of agricultural technicians for rural development projects. Completion of the study is expected in October. The implementing agency and responsible person is: Richard Noukalak, Directeur du Project Education BIRD-Cameroun, Ministere de l'Education Nationale, Boite Postale 1061, Yaounde, Cameroon.

MALAYSIA—Lembaga Kemajuan Johor Tenggara (Development Authority for Johor Tenggara) Statutory Government Body, is in the process of developing a **tourist resort complex** in the east coast beaches Tanjung Penggerang in south Johor. The authority plans to build an international standard **golf course** under the first phase of its development program, and intends to appoint golf architects/consultants of international repute to undertake planning and supervision. Interested golf architects/consultants should send resumes to Lembaga Kemajuan Johor Tenggara, 677 Jalan Petri, P.O. Box No. 180, Johor Bahru, Johor, Malaysia. Attn: Mohamed Bin HJ. ABD. Rahman, General Manager.

DOMINICAN REPUBLIC—The **Bao Dam Project,** 100 meters high, is designed to add an additional 280 million cubic meter reservoir to the existing 170 cubic meters behind the Tavera Dam (the two reservoirs will be connected). Although the downstream irrigation potential on the Yague Del Norte will be enhanced by the Bao Dam, the main object is electric power. Total cost is estimated at around $45 million, $38 million of which could be financed by IDB. Julio Sauri, Administrator, Dominican Electric Corp. (CDE), Aptdo 1428, Santo Domingo, under whose aegis the project falls.

COSTA RICA—A feasibility study has been completed and is being reviewed by the Ministry of Transport for construction of an **80-mile highway** linking San Jose with Siquirres and Puerto Viejo. Total cost is estimated at $29.4 million. First stage between San Jose and La Palma, 10.6 miles, is estimated at $4.6 million. Second stage connecting La Palma with Rio Sucio, 20.5 miles, $11.9 million. Stage three, a link between Rio Sucio and Puerto Viejo, 18 miles, $2.7 million. Fourth and final stage connecting Rio Sucio and Siquirres, 30.44 miles, $10.2 million. World Bank will loan $23.25 million. Public bids for first stage will be invited in Dec. or Jan., and construction is expected to begin during spring of 1975. The total highway project is expected to be completed during the second half of 1978. Additional information may be obtained by contacting any of the following: Ing. Ramiro Gamboa, Chief Planning Dept., Ministerio de Transported, Apartado 10176, San Jose, Costa Rica. Ing. Ricardo Echandi Z., Baltodano, Echandi & Lara Ltda., Apartado 10263, San Jose, Costa Rica. Edward and Kelcey Engineers Inc., 100 Church St., N. Y. 10007.

UNITED ARAB EMIRATES—Bin Hamoudah Trading and Services Co. is requesting **cooperation with U.S. firms in seeking maintenance contracts for oilfield equipment and major projects** such as power plants, water desalination units, refineries, and LNG plant. Bin Hamoudah is a well-regarded, influential Abu Dhabi Co. which could provide land and facilities as well as wide local connections in government and private enterprise. U.S. firm would furnish technical and administrative expertise. Abu Dhabi plans major expansion of its power and water supply installations. A small 15,000 BPD refinery and an LNG plant on Das Island are presently under construction. In addition, plans for export refineries and petrochemical plants are being discussed. The firm hopes to establish a maintenance facility to be ready when the large-scale projects begin operation. U.S. maintenance engineering firms should reply to Mr. Nasib Nashif, Manager, Industrial Div., Bin Hamoudah Trading and General Services Co., P.O. Box 203, Abu Dhabi, UAE. Cable: ALHAMOUDAH. Telex: AH328.

BRAZIL—**Sao Paulo Subway Co., METRO, requires a U.S. procurement and purchase agent** for general replacement parts and specialized maintenance tools. METRO requests candidates be dynamic, flexible, have easy access to U.S. suppliers, and be prepared for sporadic urgent requests for specific items. All inquires should be directed to: Dr. Luiz Doria, Buying Manager, Companhia Do Metropolitano de Sao Paulo, Rua Augusta 1626, 01304 Sao Paulo (SP). A 3.5 km southern stretch of the north-south line of the subway is already under experimental operation, soon to be extended to a further 3 km and later to a full length of 21.7 km. Construction of the shorter east-west line has not yet started.

COLOMBIA—Caja Colombiana de Subsidio (COLSUBSIDIO) is in initial stage of constructing a **180-bed pediatric clinic,** approx. total cost $4.5 million of which an est. $2 million will be imported. Project should be concluded in 2 1/2 years, but medical outpatient treatment section ought to be functioning in one year. COLSUBSIDIO usually buys on cash basis, but due to the magnitude of this project will consider purchasing on a credit basis from different suppliers. COLSUBSIDIO is interested in receiving descriptive literature and price lists from U.S. hospital suppliers. English correspondence is acceptable. All information should be sent to Dra. Maria Teresa de Saade, Directora Centro de Salud Infantil, COLSUBSIDIO, Calle 67 No. 10-73, Bogota. Telex: 425. Tele: 356106.

UNITED ARAB EMIRATES—Planning is proceeding for **two major road projects.** First is a route of about 120 kilometers from Beda Zayid to the Liwa Oasis. Second is about 40 kilometers from Masafi to Dibba, on the east coast. Consultant is Dar Al-Hendeseh, a Lebanese firm. Both roads are two-lane, 24 foot-wide asphalt highways designed according to international specifications. Although difficult to estimate value of contract, Abu Dhabi has budgeted DH 33 million for the Beda Zayid-Liwa Road, and consultant estimates each project costing at least $10 million. Interested U.S. firms may address inquiries to Ministry of Public Works, Attn: Sayyed Butti Bin Bishr, Under Secretary, P.O. Box 3, Abu Dhabi, UAE, with a copy to American Embassy, Box 2203, Abu Dhabi, UAE. U.S. firms should explore participation in joint venture arrangement with area firm.

NIGERIA—The government is studying **seven regional water supply schemes** in Western States, in addition to the **Ibadan waste disposal scheme.** The regional schemes would involve developing water supply systems for an average of 30-40 villages each, at an overall cost of something over $10 million. The Ibadan sewer project will probably form the basis of a separate

IBRD loan, and is expected to cost some $7-10 million, with a 45 percent foreign exchange component. Market opportunities for U.S. firms would appear to be not so much in the area of fixed equipment as in earthmoving, pipe manufacturing, and other heavy construction equipment. Implementing agencies and other appropriate contacts in Western State are: for regional water supply schemes - Western Nigeria Water Corp., 11th Fl., Cocoa House, Ibadan, Nigeria, J. A. Andu, Managing Dir.; engineering counsultant is the Israeli firm Tahal, 4th Fl., Barclay's Bank Chambers, Ibadan. For Ibadan sewer project - Western State Ministry of Works and Transport, Ibadan, I.O. Oluyemi, Chief Sewerage Engineer; engineering consultant is Canadian firm, McLaren International of Africa Ltd., P.O. Box 4066, Ibadan, Mr. Timar, Gen. Mgr. The local IBRD project officer for both projects is Ali Memon, IBRD, 2830 McCarthy St., Lagos. In the **North Central State**, in cooperation with IBRD, the government **is in the process of identifying suitable projects**; they will include an extension of the existing Kaduna water supply system, well-digging activities in the Katsina Emirate, and dam-building in the south. As in the case of the Western State projects, eventual IBRD participation is expected to be something over $10 million, with a loan projected for the middle of 1975, and construction to begin shortly thereafter. Implementing agency for the water supply projects is the North Central State Water Board, P.M.B. 2133, Kaduna, Nigeria, Attn: Gen. Mgr.; engineering consultant is the British firm Ward, Ashcroft, and Barkman, NNDC Building, Ahmadu Bello Way, Kaduna, Nigeria, Attn: Mr. Ganasingham. As above, Ali Memon is IBRD project officer.

NORWAY—Norsk Hydro A/S has announced plans to construct a **plant for production of magnesium chloride** at its Porsgrun Works on Heroa, annual production equivalent of 15,000 tons of magnesium, cost estimated at $28 million. Production to be based on a new method of manufacturing anhydrous magnesium chloride developed by Hydro, which claims its process is virtually pollution-free. New plant will replace existing magnesium chloride facilities at same location. Initiation of project is dependent on approval of Ministries of Environment and Municipal and Labor Affairs. Assuming approval is granted, construction is scheduled to begin this autumn. Contact: Director Gudleif Harg, Norsk Hydro A/S, Bygdoy Alle 2, Oslo 2.

TUNISIA — The Compagnie de Phosphate Sfax-Gafsa, a predominantly government-owned company, intends to **modernize existing phosphate mines and develop new ones** in Gafsa region of southern Tunisia. The government has obtained a loan from the Kuwaiti Fund for 19 million T D ($1 = .415 TD) and is negotiating with the World Bank for another loan for U.S. $18 million. Mining will be done primarily by Sfax-Gafsa but mining equipment, trucks, earthmoving equipment, etc., will be purchased abroad. Tunisian phosphate is mined underground rather than by strip mining. Contact: President Director General Tahar Amira, Compagnie des Phosphates Sfax-Gafsa, 9 rue Royaume d'Arabie Seoudite, Tunis. Tel: 283522.

LIBERIA — The Government of Liberia plans **expansion of Monrovia's water and sewage systems**, and has queried the IBRD/IDA about the possibility of financing. Any significant expansion would almost certainly require the use of foreign design and consulting services. Virtually all materials would have to be imported. The appropriate contact is Logan Campbell, Executive Officer for Water and Sewers, Liberia Water and Sewage Corp., P.O. Box 165, Monrovia.

PERU — Preliminary studies have started for construction of a 132 MW **hydroelectric plant** in southern Peru (Arequipa province) to be known as Charcani V. Total cost (including transmission lines) is estimated at $47.3 million. Of this amount, 6.1 percent would come from resources of the government's electric power entity, ELECTROPERU, 55.8 percent from the government's development bank, COFIDE, and 38.1 percent from foreign sources. Actual construction and placing of machinery orders is to begin in 1975 with preliminary construction and feasibility studies to take place during 1974. Termination is scheduled for the end of 1978. Interested power and transmission equipment manufacturing companies and producers of construction equipment, worker housing, safety equipment, etc. should contact the American Embassy, Avenidas Wilson and Espana, Lima. ELECTROPERU requests that interested firms not contact it until the new feasibility study is finished, about March 1975.

CHILE — The University of Chile, Alameda 1058, Santiago, has supplied an advance notice of **equipment it plans to purchase** this year and during 1975 with Government of Chile support. This list is available from the U.S. Department of Commerce, Trade Opportunities Program, Rm 1322, Washington, D.C.

INDIA — The United Nations Development Program (UNDP) is assisting the Central Water and Power Research Station (CWPRS), Khadakwasla, Poona 411 024, India, in **expanding and modernizing hydraulic instrumentation and coastal engineering facilities** in Poona. The program envisages establishment of modernized production and servicing facilities for sophisticated hydraulic instruments, and a coastal engineering research center. Estimated cost is $2.53 million; the UNDP will contribute $1.2 million in foreign exchange, and the Government of India the remainder in local currency. CWPRS' existing instrumentation workshop and port and harbor laboratory will be substantially expanded. Over 60 percent of the UNDP contribution will be utilized for purchase of equipment and instruments, 25 percent for foreign personnel and the remaining amount for other uses including travel. Among principal equipment to be purchased are digital data acquisition system; measurement instruments for general civil engineering parameters; instruments for coastal engineering research and measurement of coastal parameters and instrumentation tape recorders. Interested firms should communicate directly with Mr. P.C. Saxena, Joint Direct, CWPRS, address above.

JAMAICA — Syndicated Developers Ltd. is building 16 3-bedroom and 6 2-bedroom two-story **town houses**, 5 2-bedroom and 8 one-bedroom individual **apartment houses**, and 6 **studio apartments** (known as Smokey Vale Housing Scheme) in the upper Mannings Hill area about 8 miles from downtown Kingston. Construction has commenced and is expected to be completed within one year. Developers: Syndicated Developers Ltd., 84 Knutsford Blvd., Kingston 5, Tel: 926-6663. Architects: Marving D. Goodman & Associates, 5 1/2 Waterloo Rd., Kingston 10, Tel: 926-6241 & 926-8808. Contractors: Muir & Arscott Construction Ltd., 14 Ballater Ave., Kingston 10, Tel: 936-3355. Interested suppliers of lighting fixtures, baths, wash basins, toilet bowls, kitchen sinks and plumbing fixtures should contact the contractors.

NIGERIA — The government plans to expand its **Small-Scale Industrial Centers** (IDC's) program to establish one in each of the remaining ten States by 1980. There is one at Zaria (North Central State) and one at Owerri (East Central State). The IBRD is interested, and has sent an appraisal team to Nigeria to work out details of a possible loan. IBRD envisages a total cost of $138 million for all ten IDC's, $25-30 million financed by the Bank, and the remainder by the Federal and State Governments. Timetable for construction is not yet firm. IBRD expects to approve a loan in April 1975, and construction should begin shortly thereafter. Each IDC will offer the full spectrum of technical assistance to entrepreneurs, from model workshops staffed by expatriate technicians, to training courses in management, credit, and market analysis. IRBD sees its contribution to each IDC as amounting to about $3 million, the bulk allotted to imported manpower rather than imported material, but estimates that the latter will come to some $600-$800,000 per IDC, and it is in this category that sales opportunities exist for U.S. firms. Specific machinery to be procured—mostly for the model workshops—will vary. The total program, however, will require equipment for manufacture of textiles, clothing and footwear, wood products, paper and paper products, mineral, metal, and leather products, and other traditional items. Also manufacturing equipment for such non-traditional industries as canning, refrigerated foods, insecticides, motors and transformers, batteries, large-scale assembly plant components and sub-assemblies, mechanical tools, pharmaceuticals, food packaging, and others. Implementing agency is the Federal Ministry of Industries, Small Scale Industries Division, Yakubu Gowon Street Building, Lagos.

NIGERIA — **Expansion of Kaduna's water supply system** may be of interest to U.S. firms. At present it is adequate to provide 14 million gallons per day. The State Water Board foresees a need for 30 million gallon supply by 1977/78. A dam already under construction will provide adequate source. Projected project cost is N30 million, with IBRD supplying roughly 60 percent for foreign procurement of equipment to include treatment plant, pumping equipment, pipe line and storage tanks. Timetable calls for final IBRD evaluation during last quarter of 1974, signing of agreement in 1975, procurement beginning in mid-1975 or early 1976, completion late 1977. Implementing agency: Ahmed N. Cheema, General Manager, North Central State Water Board, P.M.B. 2133, Kaduna, Tel: 42266.

SAUDI ARABIA — Ministry of Health has announced plans to establish some **30 150-bed hospitals** throughout the Kingdom, as well as a number of **mobile clinics**. Ministry is proceeding on a priority basis and is hoping to use prefabrication techniques for creation of the hospitals. Details are not yet available, but interested firms may send general qualifications/product information directly to the Ministry of Health, Jidda.

COSTA RICA — Fabrica Nacional de Licores (FNL), an autonomous institution of the Government of Costa Rica, and Costa Rica's only producer of alcoholic beverages will invite tenders during the second half of 1975 for **new capital equipment** including automatic bottle washers, sorters, capper, labelers, bottle inspection and box conveyors. Estimated cost of the expansion plan is U.S. $2 million which will be financed by own resources. FNL plans to move to a new site in Grecia. After 1976 FNL expects to produce 4 million liters of alcohol. Write Ing. Sabel Mojica, Manager, Fabrica Nacional de Licores, Apartado 5014, San Jose.

CHILE — The Government of Chile is planning, in conjunction with Romania, construction of 1) an **ammonium/urea complex** in Cabo Negro, Punta Arenas, designed capacity 1,000 MT/day of ammonium and 900 MT/day of urea, project cost estimated at $110 million, some $50 million for foreign costs; 2) a **phosphatized fertilizer complex** in Las Ventanas, Valparaiso, made up of a phosphoric acid plant (120,000 tons/year), diammonium phosphate plant (256,000 tons/year) and sodium fluorosilicate plant (5,800 tons per year), at estimated cost of $65 million, $37 million for foreign costs; 3) a **sodium tripolyphosphate plant** in Las Ventanas, designed capacity 30,000 tons/year, raw material to be provided by phosphate complex. Romania, at Chile's request, has agreed to study details of providing equipment and eventually participating. Part of the foreign cost may be met through Exim credit lines to Romania. Interested firms may wish to contact: Prommin, Promotora de la Mineria Ltda., Casilla (POB) 2695, Santiago, Chile. Attn: Sr. Miguel Yoma, Gerente, Telex SGO 297 METAL. Phone 89414.

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